

Visitation to the School of Veterinary Medicine University of Surrey

25 February - 1 March 2019

Report to the Council of the Royal College of Veterinary Surgeons (RCVS) in accordance with Section 5 of the Veterinary Surgeons Act 1966

Contents

List of visitors	3
Introduction	4
Summary of visitors' findings	6
Standard 1 – Organisation	9
Standard 2 – Finances	13
Standard 3 – Facilities and equipment	20
Standard 4 – Animal resources	27
Standard 5 – Information resources	34
Standard 6 – Students	37
Standard 7 – Admission and Progression	41
Standard 8 – Academic and support staff	46
Standard 9 – Curriculum	51
Standard 10 – Assessment	62
Standard 11 – Research programmes, continuing and higher degree education	67
Standard 12 – Outcomes assessment	71
University.response	77

List of visitors

Representing RCVS

Professor Norman Williamson MVSc MANZCVS DipACT Chairman of the Visitors

Mr David Black BVM&S DBR MRCVS

Professor Malcolm Cobb VetMB MA DVC PhD MBA MRCVS

Mrs Jill Nute BVSc MRCVS

Professor John Elmerdahl Olsen DVM PhD Dr.Vet.Sci

Dr Clare Tapsfield-Wright BVMS MRCVS

Representing the Australasian Veterinary Boards Council Inc. (AVBC)

Professor Kym Abbott BVSc MVS PhD FACVSc

Representing the South African Veterinary Council (SAVC)

Dr Boitshoko Ntshabele BVMCh MBA DMS

Also present

Dr Susan Paterson MA VetMB DipECVD DVD FRCVS Observer

Miss Hannah Mason BVSc MRCVS Student representative

Dr Linda Prescott-Clements Director of Education, RCVS

Mr Jordan Nicholls Senior Education Officer, RCVS

Introduction

The Royal College of Veterinary Surgeons has a statutory duty to supervise veterinary degree courses under Section 5 of the Veterinary Surgeons Act 1966, "for the purpose of securing that the courses of study to be followed by students training to be veterinary surgeons and the standard of proficiency required for registration in the register shall be such as sufficiently to guarantee that persons registered in the register will have acquired the knowledge and skill needed for the efficient practice of veterinary surgery". The Council of RCVS may appoint persons "to visit the universities for which recognition orders...are proposed to be made...and to report on the courses of study, staffing, accommodation and equipment available for training in veterinary surgery and the other arrangements and facilities for such training."

For UK veterinary degrees, it is the UK's Privy Council which grants recognition to a degree enabling it to be recognised for registration purposes. Recognition is based on advice from RCVS. The Visitors' report is first considered by RCVS's Primary Qualifications Sub-Committee (PQSC), then by the Education Committee which makes its recommendation to Privy Council.

The School of Veterinary Medicine at the University of Surrey is a new UK veterinary school that has been in development since 2012. It admitted its first cohort of 48 students in September 2014 and the School's three new buildings were officially opened by Her Majesty The Queen in October 2015. The School commenced Year 5 clinical rotations in 2018, and the first cohort of students is due to graduate in July 2019.

RCVS conducted its first evaluation visit in 2017 to assess the School's progress in meeting RCVS standards for accreditation. The first cohort of students was at that time in its third year of study. RCVS also conducted a second evaluation visit in 2018 when the first cohort of students was in its fourth year of study.

The remit of the Visitor team was to assess whether the arrangements that have been made are sufficient to enable the RCVS to recommend to Privy Council that the degree of Bachelor of Veterinary Medicine and Science (BVMSci) from the University of Surrey should be recognised for registration purposes. This was a full accreditation visitation, which included an assessment of the final examinations in the summer of 2019.

As well as undertaking these visits and reporting to the UK Privy Council on the long-term recognition of the degree, RCVS also appointed two External Examiners to oversee the summative assessments and examinations taken by final year students. This was to ensure that, whatever the outcome of the visitation and regardless of the time it might take for a Privy Council Recognition Order to be agreed, there was a process in place to protect the interests of those students who were due to graduate, enabling them to register as Members of the RCVS and practise their profession in the UK.

The Visitor team was present at the University from Monday 24th February to Friday 1st March 2019. The school had prepared a Self-Evaluation Report (SER) in accordance with the RCVS standards and procedures for the accreditation of veterinary degrees which was circulated to the Visitor team well in advance of the visit and which formed the basis of discussions with staff during the week. The Visitor team met with the veterinary school staff and students, toured all the relevant facilities at the school, and undertook visits to a sample of practices that will be used by students for clinical training. Between September 2018 and January 2019, a sub-set of the Visitor team visited all Surrey partner

practices contracted to take students from cohort one for the Intra Mural Rotations (IMR), as well as those practices intending to take students from cohort two.

The Visitor team would like to thank Professor Chris Proudman for the School's hospitality during the visit, as well as Miss Fernanda Haswell and her team for the local arrangements. Administration, faculty, staff, partner practices and students were very accommodating throughout and their openness was appreciated.

The findings in this report are based on the Visitor team's review. The Visitors are not the decisionmakers and their commendations, recommendations and suggestions may be subject to amendment during the committee process.

Summary of visitors' findings

Standard 1 – Organisation

Recommendations

- 1. The School must give immediate attention to providing additional resource to ensure the resilience and sustainability of the IMR rotation management.
- 2. The School must use a real-time method of recording any deficiencies at partner practices and the consequent mitigations and resolutions. This may include findings from audit, selfassessment or VCTF observation. These systems must be established with sufficient resource provision to manage audits and effect prompt remediation.
- 3. The School must continue to ensure that annual external audits of IMR providers continues until the cohort size of the programme stabilises.

Standard 2 – Finances

There are no recommendations or suggestions.

Standard 3 – Physical Facilities

Commendation

4. The enthusiasm and engagement shown by the partner practices in providing resources for the rotations in final year is commended.

Recommendation

5. Students and staff visiting the white meat abattoir must use suitable PPE and follow Good Hygiene Practices to ensure their own safety and the safety of the food items produced by the abattoir.

Suggestions

- 6. Efforts to find a FSA-approved white meat abattoir for student visitation should continue in order to replace or complement the facility currently used.
- 7. The School should continue monitoring whether adequate space is available for students on campus at peak hours.
- 8. The School should ensure that there is sufficient and appropriate dedicated space for the VCTF team to meet tutees either in person or virtually, and/or to have confidential videoconference discussions with them.

9. The School risk register should continue to be actively reviewed and updated frequently enough to enable monitoring of the risks around scaling up of the programme to ensure effective IMR provision.

Standard 4 – Animal Resources

Commendation

10. The School is commended on the provision of a large and diverse medical and surgical case load through the relationship with partner practices, which includes a high proportion of first opinion cases.

Suggestions

- 11. Steps should be taken to ensure that each student in the following classes has the opportunity to necropsy sufficient numbers of companion and farm animals.
- 12. The placement of students in a referral practice before they complete a placement in a primary care practice should be avoided if possible. In the event that this is unavoidable, the School should monitor the students' experience in the referral practice to ensure that there are no untoward impacts on student learning.

Standard 5 – Information Resources

Suggestion

13. The School should ensure that students have reasonable access to online resources whilst on IMR rotations.

Standard 6 – Students

Suggestion

14. As cohort size increases, attention should be paid to the workload of VCTFs to ensure they have sufficient time to continue to provide effective levels of pastoral care to both students on IMR and their personal tutees in fourth and final year.

Standard 7 – Admission & Progression

Suggestions

15. The school should place more emphasis on the need for students to undertake compulsory EMS in their own time and at their own expense on the school admissions information pages of the website and in other marketing materials.

16. The school should continue seeking innovative ways to explain clearly to potential applicants what they might expect during IMR rotations.

Standard 8 – Academic & Support Staff

Recommendation

17. The School must review staffing in mission critical areas to ensure that there is sufficient depth of expertise and experience to ensure that the teaching programme can continue to operate smoothly if key individuals are not available or resign.

Standard 9 – Curriculum

Suggestions

- 18. The School should ensure appropriate and consistent provision of computers, textbooks and student study areas at the various IMR placements.
- 19. The school should ensure that pre-placement review of learning objectives and the delivery of feedback to students on rotation between placements is consistent.

Standard 10 – Assessment

Suggestion

20. The School should consider enhancing the construct validity of summative assessment of students' clinical ability.

Standard 11 – Research Programmes, Continuing & Higher Degrees

There are no recommendations or suggestions.

Standard 12 – Outcomes Assessment

There are no recommendations or suggestions.

Standard 1 – Organisation

- The school must develop and follow its mission statement which must, as a minimum, embrace all the accreditation standards.
- The school must have a strategic plan and an operating plan.
- An accredited school of veterinary medicine must be part of an institution of higher learning accredited by an organisation recognised for that purpose by its country's government. A school may be accredited only when it is a major academic administrative division of the parent institution and is afforded the same recognition, status, and autonomy as other professional schools in that institution.
- The head of school or dean must be a veterinarian and must have control of the budget for the veterinary programme.
- There must be a veterinary surgeon(s) responsible for the professional, ethical, and academic affairs of the veterinary medical teaching hospital(s)/clinic(s).
- There must be sufficient administrative staff to adequately manage the affairs of the school as appropriate to the enrolment and operation.

Background

1.1. The School of Veterinary Medicine is part of the University of Surrey. The School is one of four Schools in the Faculty of Health and Medical Science, alongside the School of Health Sciences, the Schools of Biosciences and Medicine and the School of Psychology (Figure 1a). The Head of School is Professor Chris Proudman MA Vet MB PhD CertEO FRCVS.

Figure 1a: Relationship between the School of Veterinary Medicine, Faculty of Health and Medical Sciences and the University



- 1.2. Council is the governing body of the University and is responsible for ensuring the University manages its strategy, finances and administration appropriately. The Executive Board sets strategy and ensures the delivery of effective day-to-day operations. Senate oversees the academic endeavour of the University regarding standards, governance and assurance, and has the power to make recommendations to Council.
- 1.3. The School's mission is to "inspire and educate veterinary professionals who will advance veterinary medicine to meet the needs of a changing world", and a vision "to educate confident and compassionate veterinarians committed to animal welfare, who through clinical and scientific excellence, contribute significantly to society with professionalism and integrity." The School aims to "deliver world-leading, multi-disciplinary, translational research and innovative education through local and global partnerships to benefit veterinary and human medicine."
- 1.4. Key objectives for the School are:
 - RCVS accreditation in 2019
 - Top 3 in subject league tables
 - Top quartile performance in REF 2020
 - £7.4m research income by 2021
 - Sustainable business model
- 1.5. The School operates a distributed model of clinical education, delivering intra-mural clinical rotations (IMR) in a number of partner practices. The School seeks to differentiate itself from other veterinary schools in the UK through:
 - **Partnership working.** Integration of partner expertise, experience and resources across the curriculum, but particularly in delivery of final year IMR. Use of the partnership network to create sustainable pathways into employment and to develop industry-focussed solutions to clinical, welfare and business-related issues.
 - **Research excellence.** Surrey aims to build research expertise in parallel with educational excellence. Research will be integrated into the undergraduate curriculum. Cross-disciplinary research, integrating skills from across the University with veterinary science, will differentiate the research. The School believes that the modern veterinary graduate must be research-literate.
 - Focus on veterinary pathology. The school sees an opportunity for Surrey to position itself as a leader in this discipline.
 - **Broad career horizons.** The curriculum recognises that veterinary graduates can contribute to society through many different roles; not only clinical veterinary practice.
 - **Innovation.** Teaching and research at Surrey aims to be innovative and multidisciplinary to prepare graduates for a changing world.
- 1.6. The School of Veterinary Medicine is organised into four departments (Figure 1b). Department Heads manage staff workload, set targets, conduct annual appraisal and career progression. As departments grow Section Heads are appointed to assist with staff management.



Figure 1b: Major School committees and their relationships with Faculty and University committees

1.7. The School's budget is finalised in the University's annual planning cycle. Income and expenditure projections are based upon the School's Strategic Operating Plan. Re-allocation of resource between different cost-centres are possible, conditional upon the final operational out-turn remaining unchanged. Financial planning is undertaken by the Head of School, who is the budget holder, and the Faculty's Business Finance Manager with oversight from the Dean of Faculty and the Deputy Director of Operational Finance. Resources other than financial (e.g. staff, space, equipment) are allocated by the School Operations Committee.

Comments

- 1.8. The School follows its mission statement, strategic and operating plans. It is part of a government recognised institution and is a major division with status as a professional school, with autonomy to operate within the University's structure. The Head of School has control over the allocated budget. A veterinary surgeon is in charge of the professional, ethical and academic affairs of the intra-mural rotation teaching and learning experience. Each partner practice is RCVS accredited and the clinical teaching is managed by an MRCVS. There are generally sufficient administrative staff to manage the school and its operation. Administrative staff interviewed reported high job satisfaction.
- 1.9. An area of vulnerability recorded in the risk register of the school is in the recruitment and retention of contracted IMR practice providers and the ongoing quality assurance of this process. Currently one individual conducts this activity and there is evidence that the workload has become too great, e.g. some practice audits were conducted almost two years ago, when the stated policy is to conduct annual audits. There is a vulnerability in view of the high proportion of knowledge and goodwill residing with one person, particularly in light of student numbers increasing and changes in IMR practice provision.
- 1.10. The partner practices visited in the period prior to and during the visit were at various stages of recruitment and training. Those already accepting students were all suitable for their

intended role in teaching. Initial audits of practices providing IMR rotations have been undertaken, with some of these being done 2 years ago. The proposed annual cycle of selfassessments and audits has not yet been embedded, and there is no formal ongoing method for identifying changing circumstances at partner practices (such as a CIM leaving or a change of student facilities) other than reporting by the VCTFs.

1.11. It was stated to the visit team that the auditing process for IMR providers will change to become a self-audit.

Recommendations

- 1.12. The School must give immediate attention to providing additional resource to ensure the resilience and sustainability of the IMR rotation management.
- 1.13. The School must use a real-time method of recording any deficiencies at partner practices and the consequent mitigations and resolutions. This may include findings from audit, selfassessment or VCTF observation. These systems must be established with sufficient resource provision to manage audits and effect prompt remediation.
- 1.14. The School must continue to ensure that annual external audits of IMR providers continues until the cohort size of the programme stabilises.

Suggestions

None

Standard 2 – Finances

- Finances must be demonstrably adequate to sustain the educational programmes and the requirements for the school to meet its mission.
- Schools with other veterinary-related professional and non-professional (e.g. veterinary nursing, animal sciences) undergraduate degree programmes must clearly report finances (expenditures and revenues) specific to those programmes separately from finances (expenditures and revenues) dedicated to all other educational programmes.
- Resources allocation must be regularly reviewed to ensure it meets the requirements for accreditation of the professional veterinary degree.
- Clinical services, field services, and teaching hospitals must function as instructional resources. Instructional integrity of these resources must take priority over financial selfsufficiency of clinical service operations. Clinics must be run as efficiently as possible, for example with transparent business plans, in order to set an example of good business practice for students.

Background

2.1. The School is a flagship development for the University. The Veterinary School project was funded by a substantial bank loan to the University, with three new, purposed-designed buildings completed in 2016 at a cost of £46.5m. Operational financial deficits in the early years of operation are forecast in a business plan that accurately predicted operational surpluses by 2017 and a project payback by year 15 of operations.

Area of Expenditure (£k)	17/18	16/17	15/16	14/15	13/14 N/A
a. Personnel					
a.1. Teaching staff	3,296	2,782	2,270	2,034	
a.2. Support staff	869	736	765	529	
a.3. Research staff	156	170	164	64	
Total for a	4,321	3,688	3,199	2,627	N/A
b. Operating costs					
b.1. Utilities	0	0	0	0	
b.2. Expenditure relating specifically to teaching	566	434	455	226	
b.3. Expenditure relating specifically to research	1,091	952	675	171	
b.4. General operations (excluding the above)	366	330	443	405	

Table 2.1: Annual expenditure of the School, last 5 years

Total for b	2,023	1,717	1,572	802	N/A
c. Equipment					
c.1. Teaching	108	258	157	114	
c.2. Research	44	87	35	15	
c.3. General of common equipment	94	60	31	25	
Total for c	246	405	223	154	N/A
d. Maintenance of buildings	-	-	-	-	-
e. Total expenditure	6,591	5,810	4,994	3,583	N/A

- 2.2. University reporting of School expenditure explicitly excludes the following items: utilities, depreciation on equipment & buildings, interest on bank loan, buildings maintenance, insurance, cleaning & security, staff costs for faculty and central staff supporting the School, recruitment & marketing, & library resources and subscriptions. These centralised costs are allocated to Schools via an infrastructure charge (an allocation of central support costs charged to all academic departments).
- 2.3. The University allocates funding to Schools based on the needs. It is recognised that some Schools, especially those requiring specialised laboratories & equipment, may be more costly to operate than others. No set formula (e.g. non-staff spend per undergraduate) is applied across all Schools.
- 2.4. The Head of School is challenged to achieve a contribution surplus (or deficit in early years of operations) but retains authority over how this target is achieved (for example, transferring budget between staff and non-staff lines, or between departments within the school). The University has agreed that if the target is found to be unrealistic it can be amended during the twice-yearly re-forecasting process. An example of how this has worked is the School's requirement for technical staff and IMR support. The initial budget projections underestimated the number of technicians required to operate three buildings. The School's budget was adjusted in 2015 to recognise this need and additional salary budget was provided to employ additional technicians. Overall deficits/surpluses remained unchanged.

Area of Expenditure (£k)	16/17	17/18	18/19	19/20	20/21	21/22
			Plan	Plan	Plan	Plan
a. Personnel						
a.1. Teaching staff	2,782	3,296	3,808	3,965	4,185	4,341
a.2. Support staff	763	869	955	1,025	1,071	1,114

Table 2b: Projected future expenditure of the School for next 5 years

a.3. Research staff	170	156	77	52	54	57
Total for a	3,688	4,321	4,841	5,043	5,311	5,511
b. Operating costs						
b.1. Utilities	-	-	-	-	-	-
b.2. Expenditure relating specifically to teaching	434	566	1,097	2,069	2,247	2,499
b.3. Expenditure relating specifically to research	952	1,091	1,145	1,406	1,763	1,988
b.4. General operations (excluding the above)	330	366	368	379	391	403
Total for b	1,717	2,023	2,611	3,855	4,400	4,890
c. Equipment						
c.1. Teaching	258	108	100	100	100	101
c.2. Research	87	44	86	106	133	150
c.3. General of common equipment	60	94	131	132	134	135
Total for c	405	246	317	338	367	385
d. Maintenance of buildings	-	-	-	-	-	-
e. Total expenditure	5,810	6,591	7,768	9,235	10,087	10,786

All budget allocations include appropriate assumptions on inflation.

2.5. An increase in teaching costs in the School financial plan for 18/19 reflect the need for *per capita* payments to practices hosting students undertaking IMR placements. A large increase in teaching spend budgeted for 19/20 coincides with the first full undergraduate cohort (120 students) beginning their IMR placements.

Table 2c: Cost (£k) of veterinary training (to date; 4 years data only)

	17/18	16/17	15/16	14/15	13/14
Annual cost of training a veterinary student (£k)	12	14	21	60	N/A
Student population	415	296	172	48	N/A

Table 2d: Annual revenues of the School for the last 5 years

Revenue source (£k)	17/18	16/17	15/16	14/15	13/14
a. Revenue from the state or public authority	4,546	3,098	1,909	476	
b. Revenue from private bodies					
c. Revenue from research	1,506	1,352	656	211	
d. Revenue earned & retained by the school					
d.1. Registration/tuition fees from students					
domestic/EU students	3,901	2,732	1,621	507	
international students	216	132	88	10	
d.2. Revenue from continuing education			4		
d.3. Revenue from clinical activities					
d.4. Revenue from diagnostic activities	257	354	255	83	
e. Revenue from other sources	170	165	244	122	
f. Total revenue from all sources	10,596	7,832	4,777	1,409	N/A

2.6. All income generated by the School of Veterinary Medicine are allocated in full to the School. Commercial clinical & diagnostic services (d.4 in the table above) within the School exist primarily to provide teaching opportunities & teaching materials. Whilst the commercial service is expected to deliver a small surplus in order to contribute towards university overheads, the delivery of teaching materials and opportunities take priority.



Pie chart of income sources as percentage of all income in 2017/18 £k

Table 2e: Projected future revenues of the School for the next 5 years

Revenue Source (£k)	16/17	17/18	18/19 <i>Plan</i>	19/20 <i>Plan</i>	20/21 <i>Plan</i>	21/22 Plan
a. revenue from the state or public authority	3,098	4,546	5,712	6,514	6,512	6,647
b. revenue from private bodies						
c. revenue from research	1,635	1,506	1,602	1,923	2,437	2,780
d. revenue earned & retained by the school						
d.1 registration/tuition fees from students						
domestic/EU students	2,732	3,901	5,093	5,966	6,143	6,349
international students	132	216	378	466	580	698
d.2 revenue from continuing education			2	2	2	2
d.3 revenue from clinical activities						
d.4 revenue from diagnostic activities	354	257	273	287	301	316
3. revenue from other sources	165	170	221	223	226	229
f.Total revenue from all sources	7,832	10,596	13,280	15,382	16,202	17,021

Table 2f: Summary of deficit/surplus (£k)

Notes	16/17	17/18	18/19 <i>Plan</i>	19/20 <i>Plan</i>	20/21 Plan	21/22 Plan
Income	7,832	10,596	13,280	15,382	16,202	17,021
Expenditure	5,810	6,591	7,768	9,235	10,078	10,786
Net	2,023	4,005	5,512	6,146	6,124	6,234

N.B: "Surplus" attributed to the School is intended to reflect income and expenditure controlled or influenced by the decisions and actions of the School's management team. Costs and income outside of their control are reported elsewhere in the University's finance system.

- 2.7. Allocation of funds within the School occurs through an annual budgeting process conducted by the Faculty Finance Manager and Head of School following consultation with Heads of Department and other budget holders within the School. School budgets are re-forecast twice within each year and adjusted to account for emerging demands or unforeseen circumstances.
- 2.8. At this stage of the School's development, the University is gaining understanding of the financial demands of a Veterinary School. Budgets are allocated on the basis of likely need and expenditure is monitored under specific cost centres. Data gathered from the first few years of operation will inform funding model development.
- 2.9. As a £46.5m capital investment has been made to build and equip three new school buildings, further substantial capital investment is not anticipated in the first few years of operations. However, the University's longer-term cash flow projections assume that substantial reinvestment of approximately £7m in equipment will be required 10 years after the opening of the new buildings to replace obsolete equipment and fixtures. In addition to this, long-term maintenance spend for the buildings has been included in University cash flow forecasts from 5 years after opening, in line with standard University policies.
- 2.10. Should additional capital investment be required, application can be made to the University's Capital Planning Committee. This committee meets monthly and holds capital funds which can be allocated to Schools where required. The University recognises that as the curriculum develops and advances are made in teaching and research technologies, equipment may be required that was not initially anticipated.

Home/EU students	£9,250
Overseas students	£31,500

Comments

- 2.11. The financial allocation to the School appears adequate to deliver the current teaching programme and support the School's mission. The School budget is reviewed twice-yearly and amended if necessary. The veterinary programme is the only undergraduate degree taught by the School but its staff contributes to other programmes in the Faculty.
- 2.12. Externally contracted teaching practices have Clinical Instruction Mentors who are well trained and supported by the University. Clinical teaching is provided exclusively by contracted teaching practices that are all RCVS accredited and are subjected to university audit to ensure that they comply with the terms of their contracts. Visitors were convinced that practices placed student learning as a priority, evidenced partly through the time dedicated to teaching by Clinical Instruction Mentors in place of income earning clinical activities. The University has undertaken to implement due diligence by requiring practices to declare their financial health to ensure continuity of service as a part of the annual partner practice audit process.

2.13. The visitors received assurance from the Head of School that despite the recent announcements that the University was introducing cost-saving measures including a freeze on recruitment, there will be no impact on the School's pre-agreed business plan.

Recommendations

None

Suggestions

None

Standard 3 – Facilities and equipment

- All aspects of the physical facilities must provide an environment conducive to learning.
- The veterinary school must have a clear strategy and programme for maintaining and upgrading its buildings and equipment.
- Lecture theatres, teaching laboratories, tutorial rooms, clinical facilities and other teaching spaces must be adequate in number and size, and equipped for the instructional purposes and must be well maintained. Students must have ready access to adequate study, recreation, locker and food service facilities.
- Offices, teaching preparation and research laboratories must be sufficient for the needs of the academic and support staff.
- Facilities must comply with all relevant jurisdictional legislation including health, safety, biosecurity and UK animal welfare and care standards.
- The institutions' livestock facilities, animal housing, core clinical teaching facilities and equipment must:
 - be sufficient in capacity
 - be of a high standard and well maintained
 - be fit for purpose
 - promote best husbandry, welfare and management practices
 - ensure relevant biosecurity and bio-containment
 - be designed to enhance learning

Clinical teaching facilities

- Core clinical teaching facilities may be provided on campus and/or through a 'distributed' model. The school must ensure any hospitals and practices involved with core teaching must meet the relevant RCVS Practice Standards and (for UK schools) be accredited under the RCVS Practice Standards Scheme or to the relevant standard for the teaching undertaken at the establishment.
- All core teaching sites (whether on campus or external) should provide adequate learning spaces including adequate internet access.
- The School must ensure students have access to a broad range of diagnostic and therapeutic facilities, including but not limited: pharmacy, diagnostic imaging, anaesthesia, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services and necropsy facilities.
- Operational policies and procedures must be posted for staff, visitors and students.
- Appropriate isolation facilities must be provided to meet the need for the isolation and containment of animals with communicable diseases and operated to provide for animal care in accordance with accepted modern methods for prevention of spread of infectious agents.

Background

Vet School Main Building (VSM)

3.1. This is the home of the Veterinary School, providing spaces for teaching, study, administration and research. Designed around a large central atrium, each floor of the building has a specific

function: i) ground floor: teaching spaces and service/social areas, ii) first floor: student study area, teaching spaces and student support services, and iii) second floor staff office, meeting rooms and research laboratories.

Ground floor

- 3.2. *Atrium:* This large social space is a meeting and mixing area for staff, students, partners and visitors. Catering facilities are located in the atrium and it is used as a breakout area for conferences and meetings. The open access nature of the area, at the heart of the Veterinary School means that students, staff, partners and visitors come into contact with each other.
- 3.3. *Lecture theatres:* One large (250 seat) and one smaller (150 seat) lecture theatre provide a comfortable learning environment, with multiple projection, lecture capture technology and 3D projection capability.
- 3.4. *Small group teaching rooms*: The ground floor houses 12 small group teaching spaces, some are discreet rooms, others are open "collaboration spaces." Each space has furniture for 10 people, computer and projection equipment. When not used for formal teaching sessions these spaces are used for private study by students and during breaks increasing the amount of space available at lunchtime when the atrium is busy.
- 3.5. *Clinical skills teaching unit:* This facility provides teaching space for 75 students. Mobile tables, surgical-style lighting and a range of models and teaching aids allow students to learn practical skills including surgical skills. Equipment in this laboratory includes surgical-style scrub sinks and large TV repeater screens to show instructional movies.
- 3.6. *Fledglings Veterinary Practice:* This suite of rooms is designed in the style of a small animal veterinary clinic complete with two fully-equipped consulting rooms equipped with video recording cameras for communication skills training. Kennels for dogs and cats, a pharmacy, reception desk and client management software further add to the teaching opportunities.

First floor

- 3.7. *Student study areas:* Five small group teaching rooms and a large room that can be divided into two smaller ones are provided along with an open-plan workspace with desks for 72 students plus desktop computers. Student services staff are co-located adjacent to this area and desk space is also provided for post-doctoral researchers.
- 3.8. *Teaching laboratory:* This facility accommodates up to 75 students, each bench top workstation having access to power, a sink and gas supply. Projection equipment and drop-down screens are strategically positioned allowing support material (protocols, videos) to be shown. Adjacent areas include offices for technicians, glassware wash facilities, autoclave, waste management and storage facilities.

Second floor

3.9. *Staff office:* The open-plan office area accommodates 54 staff workstations. A separate area with six workstations has been created to host the Veterinary Clinical Teaching Fellow (VCTF) team. This has been reallocated to a new space to accommodate the increasing number of VCTFs in the staffing plan. Four bookable rooms are available for meetings, the larger

boardroom having video-conferencing capability in addition to standard audio-visual equipment. Two small non-bookable rooms are available for *ad hoc* use.

3.10. *Research laboratories:* A suite of 7 access-controlled laboratories are provided to support School research in addition to 6 rooms housing support facilities and offices. Temperaturecontrolled rooms are provided at –20°C, 4°C and 37°C. Co-located are wash-up, sterilisation and storage rooms.

Vet School Pathology Building (VSP)

- 3.11. This building provides a large, wet-lab teaching classroom. Pathology facilities include *postmortem* examination areas, chillers and freezers for large carcasses, biological sample handling/processing, histology processing, digital pathology and microscopy teaching. This is designed to ACDP2/3 and SAPO3 standard.
- 3.12. Wet lab teaching area: A 75-seater classroom equipped with stainless steel, mobile tables, stools and surgery-style lighting is provided. Cold-store and freezer space is provided for specimen storage; staff and student changing facilities, shower, and storage for PPE is also provided.
- 3.13. *Live animal reception and handling:* Lairage and stocks are available for receipt and euthanasia of large animals. An overhead hoist is provided for carcasses handling.
- 3.14. *Biosecurity:* This facility is built and operated to containment level 2 status as detailed under COSHH. There is also a containment level 3 suite to enable examination of cases which pose a suspected zoonotic risk from Hazard Group 3 human pathogens. Additional requirements detailed in the Specified Animal Pathogen Order 2008 (over and above COSHH) have been designed due to the possibility of contamination by carcass submitted for *post-mortem* examination.

Vet School Large Animal Clinical Skills Unit (VSC)

- 3.15. This building provides facilities to allow student exposure to large animals (cattle, sheep horses). Animal housing, compliant with DEFRA Codes of Practice on Animal Housing (2014), is provided for cattle, sheep and horses. The facility is equipped with cattle crushes, horse stocks and portable races. A large, covered, rubber-floored examination area is available for practical classes. Hand wash, boot wash and changing facilities are co-located. Adjacent to the examination area is a 75-seater lecture room with full audio-visual equipment.
- 3.16. All three buildings are compliant with UK health and safety legislation. Specifically all scientific areas and teaching laboratories within the VSM meet containment level 2 status as detailed under The Control of Substances Hazardous to Health Regulations 2002 (COSHH). Infrastructure is in place to handle both chemical and biological agents under these regulations. All Laboratory areas within VSM have been assessed as suitable under The Genetically Modified Organism (Contained Use) Regulations 2014. Research laboratories are compliant with the Antiterrorism, Crime and Security Act, 2001.
- 3.17. Across all buildings, equipment installed is subject to regulatory inspections and maintenance as detailed under The Lifting Operations and Lifting Equipment Regulations (LOLER) 1998,

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) and the Pressure Systems Safety Regulations (PSSR) 2000.

Maintenance and upgrade strategy

3.18. The Estates & Facilities Management (E&FM) department is responsible for the provision of building maintenance. All services are planned and delivered based on industry best practice for example Planned Maintenance Services utilise SFG20 (a widely recognised, web based, industry standard) to determine frequency and content of planned works. This delivers both compliance with legislation and current best practice. The Veterinary School Maintenance Plan at this early stage in the life of the buildings and equipment, is largely planned preventative maintenance. However, expenditure on long term maintenance commences in 2018/19 with an annual allowance of 2% of total build cost budgeted (approx. £750k in 2018/19).

Catering, recreational and person storage facilities for staff and students

- 3.19. Catering is available in the school's atrium cafe, in Heart and Soul cafe/bar, and in The Bench Bar and Starbucks located nearby in Surrey Sports Park. There are also pop-up food areas and vending machines available.
- 3.20. Recreational facilities are available to staff and students in Surrey Sports Park. Facilities include a 50m swimming pool, squash courts, gym facilities, climbing wall, fitness classes and outdoor sports pitches and all-weather surfaces. Staff, students and partners benefit from discounted membership.
- 3.21. Personal storage, changing facilities and shower rooms are available for staff and students on the ground floor of VSM where every student has their own secure locker. Additional changing, hand washing and shower facilities are available in the VCP and VSC.
- 3.22. Student space on the Manor Park site is currently being reviewed (work led by the Faculty Manager) to inform planning for greater student numbers. The University is exploring options for additional space for teaching, private study and break times, including a new development at Priestly Road.

On-campus animal accommodation				
Room numbers	Capacity			
24VSM00	20 dogs			
25VSM00	20 cats			
07 VSC 00 - 12 VSC 00 (17m ²)	6 horses			
05 CSV 00 (33m ²)	Up to 23 sheep			
06 VSC 00 (43m ²)	Up to 10 cattle			

Table 3d: Premises for animals

Premises used for clinics and hospitals

- 3.23. There are 29 core clinical practices that will host final year students on rotations in the first cohort, and that the School will be working with to complete provision for scale-up for subsequent cohorts and resilience for delivery of IMR. All practices are RCVS Practice Standards Scheme accredited at the appropriate level for the placement they will be offering. All practices have passed University due diligence criteria for health and safety, financial, legal and academic probity.
- 3.24. A 'Practice Audit Form' has been created to measure compliance with relevant legislative, University and RCVS standards. Preliminary audits took place for all practices involved in the first year of IMR from February 2017 to allow time for the remediation of any deficiencies. From September 2018 in-rotation audits will take place at a time when students are present. Practice self-assessment will be required annually from 2019. Veterinary Clinical Teaching Fellows will monitor implementation of any recommendations arising from audit.
- 3.25. Remediation of deficiencies revealed during audit will be captured in an action-plan and a timeframe for redress will be agreed. Deficiencies relating to critical health and safety, biosecurity or other key factors may result in immediate withdrawal of students should it place them at risk. In all instances, should deficiencies not be resolved in the agreed time period, IMR students will not be placed at the practice until they are. Partner training and the Annual Partner Conference includes coverage of audit processes.
- 3.26. The School's diagnostic pathology service operates from the VSP building, including the CL2 *post-mortem* room which was designed specifically for student teaching. Downdraft tables are provided along with an overhead camera facility and a viewing gallery for up to 20 students. Dedicated histology teaching suite houses 8 standard microscopes, a double-head microscope and a 10-head microscope. A slide scanner is available to enable virtual microscopy.

Diagnostic and clinical support services in partner network:					
	Small animal	Farm animal			
Radiography	30 (all)	10 (all)	4		
Ultrasound	30 (all)	10 (all)	12 (all)		
СТ	5	0	0		
MRI	4	1	0		
Gamma scintigraphy	N/A	4	N/A		

Table 3f: Clinical Support Services

3.27. The VSP building includes humane slaughter facilities including a livestock holding area, a lairage, crushes for cattle and sheep and carcass processing areas. The lairage is designed to hold a small number of animals without compromising their welfare. It is designed to allow a one-way flow of animals from unloading to the point of slaughter, with a minimum of abrupt corners. Both the holding area and the lairage will provide an opportunity for the students to carry out ante-mortem inspection. The cattle and sheep crushes installed in the VSP building

are suitable for restraining animals for stunning and slaughter. Captive bolts (for cattle and sheep) and electrical stunning equipment (sheep and pigs) are available in order to be able to demonstrate their use in slaughter. Trolleys and hanging areas for carcasses and offal are available for student teaching in the principles of the post-mortem inspection. To support the delivery of the VPPH IMR rotation, the School collaborates with external abattoirs to enhance the diversity of the student experience. Students visit a high throughput red meat abattoir with annexed meat processing plant. Students also visit a family-owned low-throughput white meat plant, processing less than 10k birds per year.

- 3.28. The University of Surrey is collaborating with the University of Glasgow and the Royal Veterinary College to deliver an interactive and immersive abattoir simulation, with the aim to support student experiential learning before visiting a slaughterhouse. In this context, students learn about the workings of an abattoir and its role in food safety before a physical visit, providing them with instruments to obtain the maximum benefit from in-person visit.
- 3.29. In addition to meat processing facilities, the School has developed a partnership with an ice cream making enterprise. Students visit the facility as part of the VPPH IMR rotation to attain learning outcomes associated with foodstuff processing. Students observe the manufacturing process and observe the application of Good Manufacture Practices (GMPs), HACCP, traceability etc. in an authentic commercial environment.
- 3.30. Dry waste from VSM laboratories follows waste streams designated for either general waste or offensive waste. Biological liquid waste is autoclaved prior to disposal in the foul sewer system. Animal faeces from VSM clinical skills unit follow the offensive waste system. Clinical waste from VSP (from anatomy dissections and post mortem examinations) follows UN3291 Clinical Waste and Offensive Waste routes as appropriate. Waste categorised as CL3 (clinical *post mortem* exams) is autoclaved at 134°C for 30 minutes prior to disposal. Carcass material too large for the autoclave is double bagged and disinfected with a DEFRA-approved disinfectant prior to following a Category 1 waste route. Animal bedding from VSC currently leaves campus as non-hazardous waste. All waste leaving School premises is collected and disposed of by a contractor licenced by the Environment Agency.

Comments

- 3.31. The physical facilities on campus inspected by the team are conducive to learning. The visitor team was satisfied that timetabling and ongoing monitoring of study and recreation space within the School was currently sufficient. The additional facilities being developed at Priestley Road will provide further areas for study, recreation and catering for an increased number of students including veterinary students.
- 3.32. Additional office space has been created for the increasing VCTF team, adjacent to the open plan staff office. Office space is under review with a time and motion study scheduled.
- 3.33. The School plans to extend the large animal skills laboratory within the VSC, and this will be required as the programme increases student numbers.

- 3.34. The School has contracted with a low throughput, non FSA approved, white meat abattoir. The standard of food safety management observed by the visitors was not a good example of industry best practice. Nevertheless, with some modification of the provision of PPE, the currently-used facility could still provide useful learning opportunities for students. The students will soon have access to a 'virtual abattoir', due for completion in September 2019, will assist their understanding of the environment and procedures used in modern full throughput abattoirs.
- 3.35. The school risk register identifies several issues associated with IMR provision and scaling up of the programme. The visitors were advised that this was being monitored and mitigated monthly, reviewed six monthly and formally reviewed annually.
- 3.36. The visitor team acknowledges the continuing progress with regard to recruitment of partner practices.

Commendation

3.37. The enthusiasm and engagement shown by the partner practices in providing resources for the rotations in final year is commended.

Recommendation

3.38. Students and staff visiting the white meat abattoir must use suitable PPE and follow Good Hygiene Practices to ensure their own safety and the safety of the food items produced by the abattoir.

Suggestions

- 3.39. Efforts to find a FSA-approved white meat abattoir for student visitation should continue in order to replace or complement the facility currently used.
- 3.40 The School should continue monitoring whether adequate space is available for students on campus at peak hours.
- 3.41. The School should ensure that there is sufficient and appropriate dedicated space for the VCTF team to meet tutees either in person or virtually, and/or to have confidential videoconference discussions with them.
- 3.42. The School risk register should continue to be actively reviewed and updated frequently enough to enable monitoring of the risks around scaling up of the programme to ensure effective IMR provision.

Standard 4 – Animal resources

- Normal and diseased animals of various domestic and exotic species must be available for instructional purposes, either as clinical patients or provided by the institution. Whilst precise numbers are not specified, the school must provide access to sufficient numbers of animals and quality of animal material to provide the necessary quantity and quality of animal husbandry and clinical instruction.
- Schools must ensure that students are competent in animal handling relevant to the workplace learning and clinical work to be undertaken and that Health and Safety matters are briefed before the student begins their placement.
- It is essential that a diverse and sufficient number of surgical and medical patients be available for the students' clinical educational experience including patients in primary care settings.
- Experience can include exposure to clinical education at external sites, provided the school
 quality assures these clinical experiences and education outcomes to at least the same standard
 as university owned facilities. Further, such clinical experiences should occur in a setting that
 provides access to subject matter experts at the appropriate level, reference resources, modern
 and complete clinical laboratories, advanced diagnostic instrumentation and ready confirmation
 (including necropsy). Such examples could include a contractual arrangement with nearby
 practitioners who serve as adjunct faculty members and off-campus field practice centres.
- The teaching hospital(s) must provide nursing care and instruction in nursing procedures. A supervised field service and/or ambulatory programme must be maintained in which students are offered multiple opportunities to obtain clinical experience under field conditions.
- Under all situations students must be active participants in the workup of the patient, including physical diagnosis and diagnostic problem orientated decision making.
- Medical records must be comprehensive and maintained in an effective retrieval system to efficiently support the teaching, research, and service programmes of the school.

Background

Anatomy

4.1. Cadavers and animals are obtained for anatomy and physiology teaching through a number of ethically acceptable routes including purchase of sheep for euthanasia and embalming, purchase of research animal cadavers and owner donation of companion animal cadavers. Live animal anatomy teaching uses staff-owned companion animals; large animals are provided through a contractual agreement with the School's partner organisation Surrey Wildlife Trust. Additional anatomical specimens (viscera, organs, heads, and limbs) are purchased from a local abattoir. More recently, plastinated organs and limbs have been purchased from the Universidad de Murcia in Spain. 3D plastic models are also employed to teach topographical veterinary anatomy. Cadavers and specimens are stored frozen in a large -20° freezer or chilled in fridges at 4°C.

Pathology

4.2. The School offers a commercial pathology service. Modern pathology facilities and a team of board-certified pathologists operate this service that aims to generate a large throughput of cases that can be used for student teaching. The service currently delivers DEFRA disease surveillance services for Southeast England as well as offering a specialist veterinary pathology service to veterinary practices, research institutes, animal industries, charities and the police (forensic pathology).

Species		Number of Necropsy submissions to the Diagnostic Service in 2017/18	Number of Teaching Necropsy undertaken by each Year 2 U/G Students in 2016/17#	Estimated % of Diagnostic Necropsies to be observed or undertaken by Final Year U/G students in 2018/19†
	Cattle	59		16
Food Producing Animals	Small Ruminants	88	1	16
	Pigs	10		16
Equine		6 0		16
Poultry		30 1		16
Rabbits		6	1	16
Dogs		31	0	16
Cats		22	0	16
Other (deer, alpacas, laboratory rodents, non-poultry avian)		78	0	16

Students in year 2 of the BVMSci programme each perform a teaching PME on a chicken and a rabbit. They also work in small groups to perform a teaching post-mortem examination on a sheep, pig or calf. Cadavers are sourced for this purpose and are not part of the diagnostic caseload of the Veterinary Pathology Centre.

[†] Students in year 5 of the BVMSci programme (Pathology and Veterinary Public Health rotation) under supervision, undertake or observe a percentage of the diagnostic post-mortem cases submitted to the Veterinary Pathology Centre. This number is based on 8 weeks of the year (1 week per rotation) having IMR students present. It is expected to increase proportionally in subsequent years where larger rotation groups will be split and 2 or more weeks per rotation will host students in the postmortem facilities.

Animal handling/husbandry

4.3. Cattle, sheep and horses provided for animal handling and husbandry classes by Surrey Wildlife Trust are housed in the Veterinary Clinical Skills building. External facilities at Chichester College are used for sheep and dairy cattle classes. Sparsholt College is used for pig, dairy cattle and aquaculture classes. Dogs owned by staff and students are used for handling and behaviour classes in the School's clinical skills teaching facility. Cat classes are held at Merrist Wood College. Additional resources are provided through contractual agreements with Marwell Zoo for exotic species. Poultry and non-traditional pet handling classes are held at Merrist Wood College.

Food hygiene and public health

4.4. Food hygiene and public health learning outcomes in final year are delivered through an IMR in Veterinary Pathology and Public Health. The rotation includes abattoir visits to focus upon meat inspection and animal welfare. Students observe and understand ante-mortem inspection, slaughter and carcass dressing, and the importance of the principles of Good Manufacture Practices (GMPs). Additionally, wet specimens are acquired for use in VPH practical teaching based on-site in VSP. A suite of electronic resources, including instructional videos, of white meat abattoir operations is under development

Organisation of clinical services

4.5. Clinical teaching during intra-mural rotations (IMR) takes place in partner practices. The partnership network is managed by the Director of Veterinary Partnerships and Animal resources; delivery of IMR is managed by the Director of Clinical Education with a team of ten Veterinary Clinical Teaching Fellows (five for the first cohort of students) and is supported by two members of the placements administration team from Student Services.

Supervision and quality assurance of clinical placements

- 4.6. Oversight of student progression, learning and assessment is the responsibility of the Veterinary Clinical Teaching Fellows (VCTFs) who are undertaking a bespoke training programme, developed with the <u>Department of Higher Education</u> and incorporating the <u>Graduate Certificate in Learning and Teaching</u>. Placement supervision is provided by the Clinical Instruction Mentors (CIM) who are partner clinicians trained by the University and responsible for the delivery of agreed learning objectives. Feedback from students and CIMs on each rotation is scrutinised by the Director of Clinical Education and reported to Board of Studies. Outcomes of summative assessments, conducted by the VCTF team, are also subject to Board of Studies scrutiny, including external examiners.
- 4.7. Quality enhancement is through development of an action plan following the University's annual programme review process. Additionally, VCTFs develop practice-specific action plans following their own review of IMR delivery during each academic year.

Standard of off-campus facilities

4.8. All clinical partner practices must be accredited by the RCVS Practice Standards Scheme at the appropriate level for the service offered. A contractual obligation of IMR partner practices is the provision of dedicated learning space in the practice and internet access to allow students access to University learning resources. These and other requirements are ensured by the School's "due diligence" process, Educational Partnership Agreements and practice audit process.

Role of generalists and subject experts

4.9. VCTFs (University staff) and CIMs (practice employees) are experienced in the delivery of high quality veterinary services. Across the eight final year rotations, four core rotations will focus on primary care with the opportunity to repeat one in a 'core species elective'. One rotation is dedicated to small animal referral practice and 'special interest electives' will include the opportunity for referral options. Staff supervising each rotation will have the appropriate level of expertise; many practice-based CIMs have veterinary post-graduate qualifications. Partner

referral practices include many clinical diploma holders and RCVS Specialists. Clinical education will be supplemented by instruction from University staff with specialist clinical expertise.

- 4.10. Five of the eight final year rotations are primary care placements. They are in busy clinics with opportunities for students to engage in a range of medical and surgical cases.
- 4.11. Typical group size for IMR placements is 2 students per practice to afford opportunity for involvement in clinical cases and 1-to-1 supervision, whilst students still benefit from the support of a peer. Large, multidisciplinary hospitals used for the referral rotation have groups of up to four students though they each have an individual rota of mini-placements within the practice. Given that some year groups have uneven numbers of students, and some students may need to remediate, the School reserves the right to place some students singly. In these circumstances the School will ensure that additional levels of support both within the School and at the partner practice are in place.

Table 4b: Number of clinical cases potentially involving students

	No. of expected cases in 2018/19					
Production Animals	No. hospitalised cases	Average herd size**	No. animals seen on farm/herd health visits (not including EMS)	No. 1 st opinion cases/visits (aggregated across partner practices)	No. Referral cases	
2017-18						
Cattle	0	245	40 examined 70 inspected	2501*	0	
Small Ruminants	0	235	2 examined 50 inspected	267*	0	
Pigs	0	800	30 examined >200 inspected	41*	5% of workload	
Other	N/A					
Poultry	0	180,000 (broilers) 16,000 (layers)	20 examined/visit >60,000 inspected	1029 visits + 1250 PM**	5% of workload	

i) Production animals

* Figures are derived by extrapolating average of actual visits undertaken per student in IMR rotations 1&2 to full year. Completed student case logs were used: e.g. cattle, 61 visits per student per rotations x41 students = total cattle visits 2501.

** Poultry numbers are highly commercially sensitive. Data presented is total monthly visit and post-mortem numbers within partner network and thus potentially available for poultry elective students.

ii) Companion animals

	No. cases*				
Companion Animals	No. hospitalised cases	No. animals seen by students (not including EMS) <i>NB:</i> Years 1 &2 only	No. 1 st opinion cases (consultations)	No. Referral cases (consultations)	
Equine	>3000	6 (VSC)	>60,000	>700	
Dogs	>7000	6 (VSM)	>100,000	>6000	
Cats	>5000	8 (Merrist Wood)	>70,000	>3000	
Non-traditional companion animal	>180	201**(Merrist Wood)	>5000	N/A	

*total annual indicative caseload at partner practices.

**45 rabbits/guinea pigs, 80 reptiles, 76 birds (non-poultry).

Table 4c: Herd health programmes

	Average herd size	Herd health programmes available for student teaching		
		Sites (no.)	Animals (no.)	
Cattle	245	1300 (assuming 4 visits/yr.)	50 fertility exam 100-500 inspected	
Small Ruminants	235	123 (assuming 2 visits/yr.)	20 examined >200 inspected	
Pigs	800	50 (assuming 4 visits/yr.)	2 – 20 examined >500 inspected	
Poultry	180,000 (broilers) 16,000 (layers)	450 (assuming 2 visits/yr.)	20 examined >60,000 inspected	

4.12. Tables 4b (i), (ii) and 4c indicate that the School has access to a large clinical case load through its partnership network. Clinical partners are committed to the use of this caseload for clinical teaching. A particular feature of the School's clinical caseload is its predominantly firstopinion nature making it highly appropriate for teaching RCVS Day One Competences

Best practice in clinical teaching

- 4.13. Small group clinical teaching commences in Year 4 and is led by University staff with advanced clinical experience, some with RCVS Specialist status. During IMRs in Year 5, VCTFs conduct individual clinical tutoring. VCTFs are experienced primary care clinicians who have undertaken training in higher education. One-to-one clinical coaching and the close supervision of trained, practice-based Clinical Instruction Mentors (CIMs) provides a supportive environment in which the student can be challenged to develop.
- 4.14. Final year intra-mural rotations are structured to allow time for research and reflection. Meetings with VCTFs provide opportunities for structured discussion as do the four "Return Weeks" during which the year group is on-site. The CIMs are practice-based clinicians who ensure that time is set aside for students to be fully engaged with cases and that they perform or contribute to extended diagnostic investigations and are exposed to complex cases. The mentors are trained in how to engage students, give appropriate feedback and to provide formative assessment.
- 4.15. Exposure to a range of clinical settings, each offering different levels of care and serving different client needs ensures that students understand and are involved with the full range of treatment options. For example, the small animal partnership network ranges from high-end referral practice to charity shelter medicine. The clinical partner network reflects the types of practice and ownership structures found in the UK, giving students the opportunity to experience a range of workplace-based experiences and exposing them to a range of potential future employers.
- 4.16. Evidence-based practice will be familiar to final year students as this concept has been integrated throughout years 1-4. VCTFs are trained to use an evidence-based approach when coaching clinical students.

Comments

- 4.17. Normal animals of various domestic and exotic species are available for instructional purposes in years 1 4 of the programme and students are instructed in safe handling in on-campus and off-campus facilities. Clinical patients are provided through partner practices in intramural rotations in year five. The access to private practices provides the students with a large number of clinical cases.
- 4.18. Students receive instruction and practice in handling of some species of animals including cattle and sheep in the first semester of Year 1. The student's skills are assessed and they must pass the assessment before commencing AHEMS. Should they fail the assessment they have opportunities for remediation before further assessment. Animal handling skills are consolidated and developed further in a Year 2 module. The visitors consider that the current level of training and assessment is a satisfactory preparation for the risks presented by large animal handling in AHEMS although it may be insufficient to develop confidence at this stage in students who have little prior experience of handling large animals.
- 4.19. The average number of necropsies per student graduating has been predicted, based on the number recorded in student case logs up to and including the fifth (of eight) intramural rotations. The number is low for companion animals (0.9), borderline for production animals (1.6) and satisfactory for horses (0.5). Current numbers do not compare favourably with EAEVE and AVBC guidelines.
- 4.20. The partner practices provide intramural rotations with a diverse and sufficiently numerous caseload of surgical and medical patients available for the students' clinical educational experience. The large majority of cases seen in intramural rotations are primary care.
- 4.21. The visitors have seen evidence that all partner practices involved in intramural rotations are accredited by the RCVS Practice Standards Scheme, or equivalent, and there exists a contractual relationship between the University and the practice which ensures that the students have sufficient space, internet access and resources in the practice to provide an effective and supportive learning environment.
- 4.22. There are Clinical Instruction Mentors (CIMS) in each contracted practice and these practitioners are responsible for supervision, guidance and assessment of students in the practice. All whom the visitors have met confirmed their commitment to ensuring that students are active participants in the workup of the patient, including physical diagnosis and diagnostic problem-orientated decision making. In almost all cases students have controlled access to computerised medical record systems in the practices.
- 4.23. Whereas initially the School ensured that students would always undertake a placement in a primary care practice before a referral practice, the visitors were advised that this procedure was no longer manageable with a larger cohort.

Commendation

4.24. The School is commended on the provision of a large and diverse medical and surgical case load through the relationship with partner practices, which includes a high proportion of first opinion cases.

Recommendations

None

Suggestions

- 4.25. Steps should be taken to ensure that each student in the following classes has the opportunity to necropsy sufficient numbers of companion and farm animals.
- 4.26. The placement of students in a referral practice before they complete a placement in a primary care practice should be avoided if possible. In the event that this is unavoidable, the School should monitor the students' experience in the referral practice to ensure that there are no untoward impacts on student learning.

Standard 5 – Information resources

- Libraries and information retrieval are essential to veterinary medical education, research, public service, and continuing education. Timely access to information resources, whether through print, electronic media or other means, must be available to students and faculty. The library must be administered by a qualified librarian. The school must have access to the human and physical resources necessary for development of instructional materials.
- The school must provide students with unimpeded access to learning resources which include scientific and other relevant literature, internet and internal study resources, and equipment for the development of procedural skills (e.g. models). It will demonstrate how the use of these resources is aligned with the pedagogical environment and learning outcomes within the programme, and have mechanisms in place to evaluate the teaching value of innovations in learning resources.

Background

- 5.1. The Library and Learning Centre (LLC) on Stag Hill campus provides space for study and research including silent study areas, group areas and bookable group study rooms in which students can work collaboratively. The LLC has 1,700 study spaces, is wireless-enabled and there are 450 open access networked PCs and 144 loanable laptops, providing access to online library resources and the University network. The library search interface, SurreySearch, is available on and off campus and links through to full text of online books and journals and locations of printed copies within the library.
- 5.2. A variety of services are provided which are detailed on the library website. These include: Inter-library loan service, automatic renewals, online reservations service, self-service borrowing, photocopying/printing/scanning including printing from own device, wireless networking, and the Distance Learners Information Service
- 5.3. Emphasis is on the range and accessibility of electronic resources and comprehensive support for off-site users ensure that students on external placements have access to information resources.
- 5.4. The library has a collection of 595,000 e-books, all of which may be accessed both on and off campus. Titles are searchable electronically and students can access relevant books directly via online reading lists embedded within the virtual learning environment.
- 5.5. Initial book purchasing takes account of student numbers and of likely demand and the library will purchase an e-book wherever possible in addition to shelf copies.
- 5.6. The Faculty of Health & Medical Sciences has a designated Faculty Engagement Librarian responsible for developing appropriate collections and services and for liaising with academic and research staff.

- 5.7. SurreyLearn, the University's Virtual Learning Environment (VLE), is a system for creating, hosting and editing online learning resources. Other Learning Tools Interoperability (LTI) compliant systems (e.g. lecture capture and Turnitin) are also integrated within the VLE.
- 5.8. The School is using a number of technologies for teaching and learning including: 3D visualisers, PollEverywhere (a system for audience participation using smartphones or other devices), VetVideo MediaCore for streaming media, SlidePath digital microscopy, BoB National (on-demand television and radio for use in education), Talis Aspire (online reading lists system linking reading lists to the VLE including the option of full-text online), the Panopto lecture capture system, Xerte (an open-source, online tool for creating interactive learning resources) and LabTutor (a system for delivering physiology lessons in conjunction with laboratory teaching).
- 5.9. Evaluation of new technology for teaching is carried out in collaboration with the School's eLearning Coordinator, academic staff within the School, IT Services and the Department of Technology Enhanced Learning. Student feedback on resources is gathered directly, or through surveys. This feedback is reviewed at Staff Student Liaison Committee and conclusions reported to Board of Studies.
- 5.10. Students and staff have access to a dedicated Faculty IT Services team for advice and problem-solving, with one team member based in the Vet School main building during working hours.
- 5.11. The Library and Learning Centre is based on the Stag Hill campus, a twenty minute walk from the Veterinary School. In response to student demand a small resources room has been established in the School's main building (VSM) to provide a limited number of hard copy books and current journals
- 5.12. The Library houses <u>Additional Learning Support (ALS)</u>, the University's support service for disabled students and students with Specific Learning Difficulties.

Year	2017/18	2016/17	2015/16	2014/15	2013/14
Total budget	£143,489	£132,835	£154,221	£148,909	£115,820
Personnel	£83,581 ¹	£81,324 ²	£95,456 ³	£97,404 ⁴	£99,392 ⁵
Volumes held	1,840	1,540	1,241	595	426
Number of paid-for journals	782	706	706	Surrey does not have this information historically	Surrey does not have this information historically
Journal subscriptions (£)	£59,908.78	£51,510.90	£49,058	£45,849	£14,821

Table 5a: Library statistics

Notes:

¹ 2017/18: There are no "dedicated" staff supporting the School, however there are a range of staff who support the Vet School alongside other disciplines. Figures above based on estimation of time including Staffing calculated on 0.5 FTE Grade 4; 1 FTE 2A Customer Services Support; 0.25 Grade 2A acquisitions and support to content.

² 2016/17. As above.

³ Based on estimation of time including: 0.75 Faculty Engagement Librarian; 1 Learning Development/ Information Skills Librarian; 0.25 staff supporting purchase, activation, and support of content.

⁴ Based on 0.78 Faculty Engagement Librarian and estimation of time as part of set-up for School across various LLSS posts, also including 0.25 staff supporting purchase, activation, and support of content.

⁵ Based on 0.8 Faculty Engagement Librarian and estimation of time as part of set-up for School across various LLSS posts, also including 0.25 staff supporting purchase, activation and support of content.
 ⁶ The number of paid-for journals is a best-estimate. We have used our system to run keyword searches over the records of our journal holdings; Many of these titles are in packages and therefore difficult to cost accurately.

Comments

- 5.13. The School appears to have sufficient/adequate access to information resources to support on site and off campus teaching and learning. The Faculty Engagement Librarian and support staff based on the Stag Hill campus respond well to requests and new requirements made by staff and students for books, e-books and other online resources. Staff and students are routinely surveyed on the use of technology to enhance learning and these are reviewed at Staff Student Liaison Committee meetings.
- 5.14. Whilst on practice visits it was reported that in a small number of IMR practices there had initially been difficulties in accessing online resources due to variable internet connections and strict firewall settings.

Recommendations

None

Suggestions

5.15 The School should ensure that students have reasonable access to online resources whilst on IMR rotations.
Standard 6 – Students

- The number of professional veterinary degree students must be consistent with the resources and the mission of the school.
- Veterinary schools should establish post-graduate programmes such as internships, residencies and advanced degrees (e.g., MSc, PhD) that complement and strengthen the professional programme.
- Provisions must be made, by either the university or school, to support the physical, emotional and welfare needs of students. This includes, but is not limited to, learning support and counselling services, careers advice, and fair and transparent mechanisms for dealing with student illness, impairment and disability during the programme. This shall include provision of reasonable accommodations/adjustments for disabled students, consistent with all relevant equality and/or human rights legislation.
- There must be effective mechanisms for resolution of student grievances (e.g. interpersonal conflict or harassment).
- Mechanisms must be in place by which students can convey their needs and wants to the school.
- The school must provide students with a mechanism, anonymously if they wish, to offer suggestions, comments and complaints regarding compliance of the school with the RCVS standards for accreditation. These materials must be made available to RCVS as part of the annual report.

Background

6.1. The School's strategy for BVMSci student numbers is to incrementally grow to a target cohort size of 150 students per year (Table 6a); the new School buildings were designed to accommodate a maximum class size of 150. The School is committed to delivering a student:staff ratio of 10:1. A first cohort of 48 students was admitted to allow them to be taught in temporary facilities on the Stag Hill campus (before the new buildings were available), and to enable a smaller cohort to embark upon the first year of IMR rotations in year 5.

	2018/19*	2017/18	2016/17	2015/16	2014/15
First year	153**	140	127	123	48
Second year	140	121	123	49	n/a
Third year	117	114	47	n/a	n/a
Fourth year	105	46	n/a	n/a	n/a
Fifth year	41	n/a	n/a	n/a	n/a

Table 6a: Number of veterinary students enrolled in the BVMSci programme

*Figures taken from the start of the academic year and are subject to attrition in early semester 1 and include students repeating a year both with and without attendance.

**Consists of 149 new enrolments and 4 repeating students

BVMSci student numbers and BSc (Veterinary Bioscience) student numbers

6.2. The School of Bioscience and Medicine delivers a Veterinary Bioscience BSc programme which admits between 20 – 30 students per year (Table 6b). Veterinary School staff deliver

approximately 20% of this programme and there is limited sharing of resources. This programme is primarily delivered on the Stag Hill campus.

	2018/19	2017/18	2016/17	2015/16	2014/15
First year	25	22	22	36	30
Second year	21	22	31	27	12
Placement year	4	18	21	9	6
Third year	28	33	14	8	8

Table 6b: Number of Veterinary Bioscience (BSc) undergraduate students

Postgraduate programmes

6.3. The one year, taught MSc in Veterinary Microbiology has been running since 2012. It is run jointly with local veterinary research institutes: the Animal & Plant Health Agency (APHA) and the Pirbright Institute.

Student services

- 6.4. The Student Handbook, available to all students electronically, provides detailed information to students about services, policies and procedures and information about their course. This document is made available on the SurreyLearn site at the start of each academic year.
- 6.5. Students can access appropriate support services directly or after "signposting" by their personal tutors or the student peer support network. For students with health problems a range of healthcare services are provided on campus including an NHS medical practice.
- 6.6. The University's Wellbeing Centre, based at the Stag Hill campus, provides support when personal and health issues are impacting on a student's ability to study and cope at University.
- 6.7. <u>Additional Learning Support (ALS)</u> is a confidential service to assist students with a range of difficulties including: autism, mental health difficulties, medical conditions, and specific learning difficulties e.g. dyslexia, dyspraxia.

Student peer mentoring scheme

6.8. This scheme trains and supports volunteer veterinary students in supporting their peers. It is overseen by the Centre for Wellbeing and the Senior Personal Tutor, with each peer supporter undertaking 30 hours of training and ongoing support in their mentoring role.

Mechanisms for resolution of student grievances

6.9. Student welfare issues will be dealt with by Student Services based in the Student Services Centre. The Students' Union is responsible for offering advice and support to students wishing to initiate procedures using the University's internal process. A copy of the Student Charter is contained in the Student Handbook which describes the expectations of student behaviour. For details of academic appeals, misconduct, and fitness to practise procedures, see Standard 7.

Methods for identifying and remediating failing students

6.10. Personal tutors are responsible for calling a meeting with a tutee when there is a cause for concern. If the cause for concern is a failed assessment, the Exams and Assessments team automatically notifies the student's personal tutor who will arrange a meeting to discuss the student's progress. The tutor will encourage the student to contact the leader(s) of the failed module(s), direct the student to the appropriate learning resources, and will investigate whether additional learning support is needed. Follow-up meetings will be arranged. Where it becomes clear from assessment results that a student is struggling, the personal tutor will discuss with the student whether additional support is necessary.

Mechanisms for students to convey their needs and requirements and to influence school decisions

- 6.11. There are a number of formal feedback mechanisms in place to meet this requirement:
 - **MEQ process:** students provide feedback on each taught module.
 - Student representatives
 - Staff-Student Liaison Committee
 - **Boards of Studies:** Chaired by the Programme Leader, and including student representatives
 - Shape your Surrey: Independent student survey
 - National Student Survey

Additional feedback mechanisms include:

- Personal Tutor meetings
- Pastoral forum
- Head of School update meetings
- Head of School & Veterinary Society President meetings
- Dean's Lunches
- SurreyLearn
- Student suggestions, comments and complaints about RCVS Standards for Accreditation
- IMR student feedback
- Student feedback to Student Services

Comments

- 6.12. More than adequate provision is made to support the physical and emotional needs of students whilst they are based on the Manor Park campus. Visitors were satisfied that the first cohort of IMR students received a high standard of pastoral care whilst on rotations.
- 6.13. Each VCTF will be responsible for at least 20 students in their personal tutor roles in addition to their considerable clinical supervisory and assessment workload.

Recommendations

None

Suggestions

6.14. As cohort size increases, attention should be paid to the workload of VCTFs to ensure they have sufficient time to continue to provide effective levels of pastoral care to both students on IMR and their personal tutees in fourth and final year.

Standard 7 – Admission and Progression

- The selection criteria for admission to the programme must be consistent with the mission of the school. The number of students admitted must be consistent with the resources available to the school.
- In relation to enrolment, the school must provide accurate information in all advertisements regarding the
 educational programme by providing clear and current information for prospective students. Further, printed
 catalogue or electronic information must state the purpose and goals of the programme, provide admission
 requirements and procedures, state degree requirements, present faculty descriptions, clearly state
 information on tuition and fees along with procedures for withdrawal, give necessary information for
 financial aid programmes, and provide an accurate academic calendar. The information must include the
 accreditation status of the degree course (whether by RCVS or other relevant accrediting bodies), and the
 requirements for eventual registration/licence, including fitness to practise.
- The selection and progression criteria must be clearly defined, consistent, defensible, be free of
 discrimination or bias, and take account of the fact that students are admitted with a view to their entering
 the veterinary profession in due course.
- An accurate description of the selection criteria and processes must be published and readily available to
 potential students. The school must regularly review and reflect on the selection processes to ensure they
 are appropriate for students to complete the programme successfully, including consideration of their
 potential to meet all the RCVS Day One Competences across the common UK domestic species.
- Adequate training (including periodic refresher training) must be provided for those involved in the selection process to ensure applicants are evaluated fairly and consistently.
- Potential students must be advised of the demands of the veterinary course and RCVS requirements for fitness to practise.
- Factors other than academic performance should be considered for admission, with the aim of selecting students who will be capable of succeeding in a variety of fields within the profession.
- The school must have a strategy for widening participation and engaging students from a variety of social backgrounds.
- If not otherwise covered within the early part of the course, the entry criteria for the programme must include evidence that the student has a solid background in the chemical, physical and biological science and mathematics, in order to meet the requirements of the EU Directive on basic subjects.

Students with a disability

• There must be clear policies and procedures as to how applicants with disabilities or illness will be considered and, if appropriate, accommodated on the programme, taking into account the requirement that all students must be capable of meeting the RCVS Day One Competences by the time they graduate.

Student progression

- The basis for decisions on progression (including academic progression and professional fitness to
 practise) must be explicit and readily available to the students. The school must provide evidence that it has
 mechanisms in place to identify and provide remediation and appropriate support (including termination) for
 students who are not performing adequately (including areas such as practical animal handling, client
 communication etc).
- The school must have mechanisms in place to monitor attrition and progression and be able to respond and amend admissions selection criteria and student support if required.

Student exclusion

• Mechanisms for the exclusion of students from the programme, either for academic reasons or under fitness to practise procedures, must be explicit.

Appeals and misconduct

- School policies for managing appeals against decisions, including admissions, academic and progression decisions, should be transparent and publicly available. The process for exclusion of students on any grounds must be explicit.
- Policies for dealing with student misconduct and fitness to practise must be explicit.
- 7.1. Candidates are assessed on academic ability, experience and personal attributes/competency (the latter based on the RCVS Day One Competences).

Stage 1 – Preliminary Shortlisting

	GCSE (or equivalents)	A Level (or equivalents)	BTEC	International Baccalaureate	Degree	Access
Academic	5 subjects at grade A/7 Must include Biology, Physics and Chemistry (or Double Science) Maths and English Language at grade B/5	AAB Must include grade A Chemistry and Biology Critical Thinking or General Studies not included	D*DD - DDD Must be in Animal/Science related subject area Grade A Chemistry A Level also required	36 - 35 points Must include Biology, Chemistry and 1 other at higher level score 6	2:1 in a Bioscience related subject	45 level 3 credits – 39 level 3 credits at distinction, including 15 credits in Biology and Chemistry (each), and 6 level 3 credits at Merit
Worlk Experience		um requirement must be	completed prior to ap	mal related work experien oplication. Applicants must al to support their record c	upload signed/date	

Stage 2 – Online Questionnaire

7.2. A questionnaire is designed to assess the insight, motivation and understanding of the applicant and details of relevant work experience. Applicants must demonstrate their current knowledge of the profession and appreciate the diversity of veterinary roles. Responses are assessed for evidence of communication skills and team working.

Stage 3 – Multiple Mini Interviews (MMI)

7.3. Applicants with the highest questionnaire scores are invited to attend an interview day at the University. Each MMI cycle comprises 8 x 4.5 minute stations; each station asks a question or provides a task to assess a competency or characteristic as follows:

	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Station 8		
Competency	Problem Solving & Critical Thinking	Data Interpretation & Emotional Intelligence	Integrity & Ethical and Moral Reasoning	Empathy & Ethical and Moral Reasoning	Problem Solving & Critical Thinking	Reflection & Empathy	Reflection & Observation	Self-perception (Questionnaire)		
	Communication									

- 7.4. Training for those involved with selection (specifically interviews) is conducted in a face-to-face briefing prior to the start of the recruitment cycle. Electronic training resources and bespoke training sessions are also available for staff unable to attend the main session.
- 7.5. The University is committed to widening participation and enhancing diversity across its student population.
- 7.6. The University's policy of equal opportunity ensures that applicants are considered on similar academic grounds. Students with a wide range of disabilities or health conditions can achieve the required standards of knowledge and skills to enable them to practise each case is individually assessed with close reference to the RCVS 'Guidance on the Admission of Students with Disabilities'. All offers are conditional upon <u>occupational health clearance</u> (facilitated by the Robens Centre). In addition to pre-course screening, the Occupational Health team assesses students ahead of enrolment so that any required adjustments can be identified and initiated.

Review of admissions criteria and processes

- 7.7. Selection criteria and the admissions process are subject to annual review. Reference is made to applicant feedback from post-event questionnaires, applicant performance and feedback from the staff and partners involved in recruitment. As a result of review, questions for the MMIs and questionnaire have been revised and refreshed and the scoring system has been amended.
- 7.8. The effectiveness of the selection process both in terms of student performance and in meeting the mission of the School will be evaluated. Detailed reviews will be conducted as student cohort's progress and richer progression data become available from 2019. It is intended that any observed patterns of poor performance in cohorts will be addressed by changes to entry criteria.

Requirements for progression

- 7.9. Information on progression and awards can be found in the <u>University Regulations for Taught</u> <u>Programmes</u> and Student Handbooks, both of which students are informed of during Welcome Week.
- 7.10. Students study a total of 120 credits per year (over 2 Semesters), split into a number of 15/30 credit modules. All modules carry a pass mark of 50% and are classed as compulsory by University definition this means that not all assessments within a module need to be passed, providing the overall module is passed.

7.11. Under certain criteria (level aggregate of at least 55%, module mark of no less than 40%) up to 30 credits in year 1 and up to 15 credits in subsequent years may be compensated.

Entering	Total Students	Relative	Attrition	Absolute	Attrition	Transfe Progra	Total Attrition		
Class	n	Academic n (%)	Personal n (%)	Academic n (%)	Personal n (%)	Academic n (%)	Personal n (%)	n	%
2014/15	48	3 (6%)	2 (4%)	1 (2%)	2 (4%)	0 (0%)	1 (2%)	8	17%
2015/16	123	8 (7%)	2 (2%)	5 (4%)	4 (3%)	3 (2%)	1 (1%)	19	15%
2016/17	126	11 (9%)	3 (2%)	0 (0%)	1 (1%)	7 (6%)	0 (0%)	15	12%
2017/18	136	2 (1%)	1 (1%)	1 (1%)	1 (1%)	11 (8%)	0 (0%)	5	4%
2018/19	149	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4 (3%)	0 (0%)	0	0%

Table 7a: Attrition of veterinary students

Census date TBC (awaiting updated data to include late summer resits

Total students: students who have entered the class and enrolled onto the programme at the beginning of the year (i.e. does not include course-suspended entrants).

Relative Attrition: students who transfer into earlier years, transfer to another vet school.

Absolute Attrition: students who leave and never return.

Transfers onto Programme: students joining a cohort at any point after initial registration (i.e. returning suspended students or entrants direct to year 2).

Misconduct and fitness to practise

- 7.12. The School uses the University's well-established complaints and disciplinary procedures. All are publically available on the university's website:
 - Regulations for Academic Integrity
 - <u>Regulations for Fitness to Practise</u>
 - Procedure for Complaints
 - <u>Student Disciplinary Regulations</u>
 - <u>Regulations for Fitness to Study</u>
- 7.13. The process for exclusion is explicitly outlined in the relevant regulations. Student appeals against university decisions are managed through the Academic Appeals process which is available via the university website (<u>Regulations for Academic Appeals</u>) and referred to in the Student Handbook. The Student Union has dedicated officers to support and offer impartial advice to students on disciplinary matters and appeals. The university has a dedicated Office of Student Complaints, Appeals and Regulation (OSCAR).
- 7.14. All students are required to read the RCVS/<u>University Guidance on Fitness to Practise</u> and submit an agreement to confirm they have understood both. Fitness to Practise is also covered in Welcome Week and is referred to in the Veterinary Professional module.

Identification and remediation of poor performance

7.15. Academic performance is tracked formally by the Board of Examiners which meets at least three times a year. Concerns may be raised by students directly with staff. Each student is assigned a personal tutor who acts as a key contact for any matters relating to academic progress, personal development and welfare, and underpins the process of induction and orientation into the university community. Additionally, the School has a Senior Personal Tutor to advise on complex issues or act as a proxy should a student's tutor be unavailable.

7.16. The University offers a range of services to support students that require additional academic, personal and professional support. The <u>Student Personal Learning and Study Hub (SPLASH)</u>, based in the library, operates-a drop in service, tutorials and seminars in addition to e-resources on academic skills. A self-study e-learning programme called '<u>Back on Track</u>' has been created to help underperforming students.

Comments

- 7.17. Initial analysis of the effectiveness of the selection process is being undertaken and the visitor team understood that the selection MMIs were being adapted in line with modern best practice.
- 7.18. The membership of the selection teams included students and IMR partners.
- 7.19. The school appears to be succeeding in its widening participation strategy and has plans to engage more with male students to improve the gender balance – for example a "Men in Vet Med" initiative.
- 7.20. The school on-line prospectus mentions the self-funded requirement for EMS within the finance section of the web-page.
- 7.21. The school is considering ways of demonstrating to potential students how the distributed model operates. This may include attendance at Open Days by IMR partners.

Recommendations

None

Suggestions

- 7.22. The school should place more emphasis on the need for students to undertake compulsory EMS in their own time and at their own expense on the school admissions information pages of the website and in other marketing materials.
- 7.23. The school should continue seeking innovative ways to explain clearly to potential applicants what they might expect during IMR rotations.

Standard 8 – Academic and support staff

- The institution must ensure that all staff are appropriately qualified and prepared for their roles.
- The total number, qualifications and skills of all staff involved with the programme, including teaching staff, 'adjunct' staff, technical and support staff, must be sufficient and appropriate to deliver the educational programme and fulfil the school's mission.
- Staff who participate in teaching must display competence and effective teaching skills in relevant aspects of the curriculum, regardless of whether they are full or part time, residents, interns or postgraduate students, adjuncts or off-campus contracted teachers.
- Academic positions must offer the security and benefits necessary to maintain stability, morale, continuity, and competence of the academic staff. Academic staff should have a balanced workload of teaching, research and service depending on their role; and should have reasonable opportunity and resources for participation in scholarly activities.
- The veterinary school must provide evidence that it utilises a well-defined, comprehensive and publicised programme for the professional growth and development of staff; including formal appraisal and informal mentoring procedures, especially for junior academic staff. Staff must have the opportunity to contribute to the school's direction and decision making processes.
- The school must be able to demonstrate that it has a programme for staff development in tertiary teaching theory/practice, and how that programme is managed.
- Promotion criteria must be clear and explicit. Promotions must recognise excellence in, and place equal emphasis on all aspects of teaching (including clinical teaching), research, service and other scholarly activities.

	Non-	Veterina	rians			Vet	erinarians		
							Veteri	nary Specia	lists
	BSc only	MSc	PhD	BVSc or DVM only	MSc	PhD	Board Certified or Diploma Holders	Board Certified / Dip Holders & Master's Degree	Board Certified / Dip Holders & PhD
Head of School									1
Professor			1.4			0.2	0.2	0.9	4.4
Reader				0.2					1
Senior Lecturer			2.5			1.4			2
Lecturer			7			3			
Teaching Fellows				17.8	2	3	3.8	1.8	
Associates					0.17				
Clinical Instruction Mentors				20*					
Totals			10.9	18	3	7.6	4	2.7	8.4

Table 8a: Academic staff of the veterinary programme - number and qualifications

Total		Veterinary Specialists: 15.1
Total	Non-Vets: 10.9	Vets: 63.7

*Contracts are held directly with partner practices and the FTE reflects the cumulative commitment of time made across the practices to support each full cohort. Clinical Instruction Mentors have 20 hours of training. Clinical Instruction Mentors are qualified Veterinarians and have varying levels of qualifications. The School estimates that the Clinical Instruction Mentors (CIMs) contribute 20 FTE to the veterinary programme (80 CIMs each contributing 0.25 FTE).

The data in table 8a is current at 1st November 2018 and does not include: (i) staff who are engaged in externally funded research (currently 22.9 FTE (inc. 2 FTE vacant posts)); and (ii) external lecturers who are paid on an hourly basis and contribute less than 10 hours per annum.

Table 8b: Support staff for the veterinary programme

Role	Technical Staff (FTE)	Admin & Other Staff (FTE)
Responsible for the care and treatment of animals	9.9	
Responsible for the preparation of practical and clinical teaching	10.4	
Responsible for administration, general services etc.		8.1
Support staff primarily engaged in research		13.5
Other		
Total Support Staff:	20.3	21.6

Table 8b data does not include a team of five student support staff, a central University resource but dedicated to, and physically located in, the Veterinary School, or the support staff employed by the External Partnerships involved in the delivery of IMR

Recruitment and retention of staff

Table 8c: Loss and recruitment of academic staff

Position	Number of School Lost	Discipline/Specialist	Number of School Recruited	Year
		Production Animal		2015/2016
Lecturer	5	Medicine; Epidemiology (x2); Equine Medicine; Veterinary	6	2016/2017
		Public Health		2017/2018
Head of Veterinary Education	1	Pedagogy	1	2015/2016
Senior Lecturer	4	Neuroimmunology; Microbiology; Veterinary	4	2015/2016
Senior Lecturer	4	Pathology; and Neuroscience	+	2017/2018
Senior Teaching	3	Zoo Animal Medicine (0.2FTE); Professional Skills; and	2	2015/2016
Fellow	5	Production Animal Medicine	2	2017/2018
		Welfare and Behaviour; Pharmacology and		2016/2017
Teaching Fellow	4	Therapeutics; Veterinary Clinical; and Small Animal Studies	19	2017/2018

Professor	2	Head of Department (Clinical Services); and Veterinary Sciences	2	2017/2018	
-----------	---	---	---	-----------	--

Voluntary staff turnover in the School for the period 1st August 2017 to 31st July 2018 was 12.4%, which is in line with the Faculty average (12.4%) and is slightly higher than the University average (12.2%).

- 8.1. The School has made use of short-term and *ad-hoc* appointments using Associate and Visiting members of staff, and/or guest lecturers from the University's partner network to assure teaching delivery. The School follows the <u>Code of Practice for Associate Tutors, Guest</u> Speakers and Visiting Academics.
- 8.2. The allocation of staff to departments within the School is driven by: i) the needs of the curriculum; ii) research strategy; and iii) provision of appropriate mentorship. The School has a Strategic Operating Plan incorporating a staffing plan which describes the number of staff and skills required to deliver each module. There is flexibility within this plan should it become apparent that the School needs extra or differing resource.
- 8.3. All teaching staff are required to hold at least three years prior teaching experience and/or to hold a teaching qualification. In the absence of these, completion of the Graduate Certificate in Learning and Teaching is a requirement of their probationary period (usually 2 years for Teaching Fellows, 3 years for Lecturers).
- 8.4. All staff receive student feedback via an online Module Evaluation Questionnaire (MEQ). The outcome of this is measured against University benchmarks.
- 8.5. The University has a <u>Department of Higher Education</u> which provides credit-bearing programmes and support for teacher development. The Department has recently led a staff development workshop on Professional Standards and Identity within the School. Learning and Teaching "Away days" are delivered at School and Faculty level.
- 8.6. The University has a raft of <u>policies</u> designed to make it an attractive and rewarding place to work. These include policies on gender equality, flexible working, parental leave, time off in lieu, wellbeing and dignity at work. Staff engagement and satisfaction is measured annually through the staff survey and individual staff development plans are created during the annual appraisal process. At School level, staff engagement has been enhanced through initiatives designed to create shared ownership of the School's mission, vision and values. High performing staff at all levels are rewarded through the annual <u>Performance Related Pay scheme</u>.
- 8.7. Table 8c indicates that staff turnover in the School has been marginally above sector norms. Recruitment has attracted high quality applicants for most advertised posts. A specialism that has proved difficult to recruit to has been production animal medicine.

Financial provisions for staff development

8.8. Scientific/CPD meeting attendance is encouraged through provision to each member of staff an annual budget of £1,000. Attendance and presentation at scientific meetings is recognised as beneficial to individual development and raising the profile of the School.

- 8.9. Sabbatical/study leave is an important feature of the University's commitment to strengthening the skills, knowledge and expertise of its academic staff. Applications are considered by the Executive Dean of the Faculty against specific criteria including potential impact on the student experience. There have been no applications for sabbatical leave to date. It is expected that the number of applications for sabbatical leave within the school will increase as more staff meet the length of service criteria and move out of their probationary periods.
- 8.10. Award-bearing courses undertaken by School staff may be supported by the University if directly related to the role. Time off to attend examinations is permitted but this must not be at the expense the student experience. To date, financial support and time off has been granted to staff undertaking an MSc in Veterinary Epidemiology and Public Health, and to another member of staff who is undertaking a part-time Graduate Diploma in Law.
- 8.11. All academic staff are required to have one peer observation of teaching review each academic year. Academics can choose their own academic observer and teaching activity is reviewed according to their developmental needs. The process, which commenced in academic year 2017/18, is designed to help individual development. No other party is privy to the outcomes of the review unless the observee wishes to disclose their feedback. A staff workshop to support this process has been conducted.

Supporting and mentoring staff

8.12. All junior staff are offered a mentor in the School who provides support and advice in addition to that provided by the line manager. This occurs both informally and through the formal probation process. Additionally, staff have a designated "senior colleague," often someone from another School, who can offer advice and support about career development.

Staff performance and workload management

- 8.13. All staff are appraised annually, with interim meetings according to need. The University has a dedicated staff development team that provides a range of personal development courses, coaching, mentoring etc.
- 8.14. Underperformance is addressed at the earliest opportunity in an attempt to resolve it informally. The University has comprehensive policies on <u>capability</u> and <u>disciplinary</u> matters which address performance management. To date, there have been no members of staff requiring performance management.
- 8.15. The University has a workload allocation model which the School adheres to. Within this model, expectations about teaching load are defined with allowances being made for research active staff and extra administrative jobs e.g. programme leader, module leader.

Promotion

8.16. An annual promotion round occurs for academic staff. Promotion is determined by Promotion Committees either within the Faculty or the University, depending upon the level of appointment. Promotion cases are considered on the basis of contributions to teaching, management/administration and research (if on the research pathway). 8.17. Technical and support staff are promoted when there is a strong case that a role is required to deliver work at a level of higher capability and it has been demonstrated that the post holder is demonstrating these higher competencies. To ensure fairness and equality, a full recruitment process is undertaken.

Comments

- 8.18. The School currently has adequate numbers of suitably qualified staff to deliver most elements of the teaching programme and meet the School's mission. However, in several cases there is only one member of academic staff in a role that is critical to the delivery of the curriculum, and there appears to be little capacity to respond to increased demand.
- 8.19. All teaching staff are experienced or receive adequate training for their teaching and assessment roles. Appointments of academic staff have the normal benefits, opportunities and expectations for academic appointments at Universities within the United Kingdom.
- 8.20. There are staff development programmes available within the school and university for academic and support staff who were well aware of their opportunities to participate. Staff are well supported in their development to achieve permanent status and in their applications for promotion through the appraisal process and mentoring offered.
- 8.21. Staff meetings and feedback through line managers enables academic and support staff to contribute to the school's direction and activities. Staff reported that they were well aware of promotion criteria.

Recommendations

8.22. The School must review staffing in mission critical areas to ensure that there is sufficient depth of expertise and experience to ensure that the teaching programme can continue to operate smoothly if key individuals are not available or resign.

Suggestions

None.

Standard 9 – Curriculum

- The curriculum must be designed, resources and managed to ensure all graduates have achieved the graduate attributes expected of a degree programme at level 7 in the European Qualifications Framework, the minimum training requirements in the European Directive 2013/55/EU on the mutual recognition of professional qualifications and the RCVS Day One Competences.
- The learning outcomes for the programme must be explicitly articulated to form a cohesive framework.
- Programme learning outcomes must be communicated to staff and students and:
 - underpin and ensure the effective alignment of all content, teaching, learning and assessment activities of the degree programme;
 - form the basis for explicit statements of the objectives and learning outcomes of individual units of study; and be reviewed, managed and updated to ensure they remain relevant, adequate and are effectively achieved.

Management

- The school must have a formally-constituted committee structure (which includes effective student representation), with clear and empowered reporting lines, to oversee and manage the curriculum and its delivery. The committee(s) must:
 - determine the pedagogical basis, design, delivery methods and assessment methods of the curriculum;
 - oversee quality assurance of the curriculum, particularly gathering, evaluating, making change and responding to feedback from stakeholders, peer reviewers and moderators, and data from examination/assessment outcomes;
 - review the curriculum at least every seven years and;
 - identify and meet teacher training needs for staff, maintaining currency of their skills and competence for future curriculum development.

Content

- The curriculum should include the following:
 - understanding of biological principles and processes of veterinary significance;
 - expertise in recognising and advising on normal animal structure and function, husbandry, behaviour, nutrition and feeding, reproduction and breeding, homeostasis, pathophysiology, agents of disease and the natural history and clinical manifestations of important animal diseases;
 - expertise in medicine, surgery, and anaesthesia applicable to a broad range of common species.
 Students must develop entry-level skills in physical examination and laboratory diagnostic techniques and interpretation (including clinical pathology, diagnostic imaging and necropsy), disease prevention, biosecurity, therapy(including surgery and pharmacotherapeutics), patient management and care (including primary care, intensive care, emergency medicine, surveillance and isolation procedures) for individual animals, herds, flocks and other populations;
 - knowledge, skills, values, attitudes and behaviours necessary to contribute, as a veterinarian, to promoting animal health and well being, within changing societal expectations;
 - clinical, epidemiological, pathophysiological and regulatory skills in management of animal diseases which are:
 - endemic to the UK and the EU
 - · endemic to and of special consideration in the country in which the school is located
 - exotic to the UK and the EU and which are currently regarded as being of concern as potential emergency animal diseases or diseases of global veterinary significance
 - significant emerging diseases

- entry level capability (to OIE standards) in preventative medicine/epidemiology, zoonoses, food safety and hygiene, regulation of animals and animal products, and management of the interrelationship of animals and the environment. This training must include experience in abattoirs
- professional level problem solving skills in evidence-based diagnosis and clinical management, and data and information management skills
- capacity for professional communication; the ability to acquire information from the owners of animals by direct interaction as well as retrieval of archival data from medical records, communication with colleagues, regulatory bodies and clients
- skills in application of professional ethics, delivery of professional services to the public, personal and business finances and management. An appreciation of the breadth of veterinary science, career opportunities and relevant information about the veterinary profession
- self-management skills in identifying and meeting personal learning needs, maintaining well being and professional relationships.

Extra Mural Studies (EMS)

- EMS must be an integral and structured part of the education and training of veterinary students. Veterinary schools must demonstrate how it is incorporated in the curriculum.
- Evident must be provided that extramural farm animal husbandry practical work is used within the curriculum to complement intramural studies to support students' attainment of comprehensive understanding of livestock and farm systems.
- Intra-mural core teaching must be supported by extramural clinical studies.
- There must be a system in place to enable EMS providers to provide feedback to the school on the performance of students during EMS and on the EMS programme.
- There must be a member of the academic staff responsible for the overall supervision of all types of EMS, including liaison with EMS providers and ensuring all students secure required placements.
- The school must have mechanisms in place to support students to take responsibility for their own learning during EMS, including preparing before each placement, setting learning objectives in consultation with tutors, being familiar with guidance provided by their university and RCVS for EMS, communicating effectively with placement providers before, during and after placements, and maintaining a reflective log of their EMS experience.

Background

9.1. The first three years of the programme are largely systems-based and spiral in design: Year 1 (FHEQ Level 4) curriculum is focussed on 'Normal' to gain an understanding of anatomy, physiology, animal husbandry and basic professional skills. The theme for Year 2 (FHEQ Level 5) is 'Abnormal,' with a focus on pathology, pathophysiology, infectious diseases in different body systems, different species and an introduction to veterinary public health including epidemiology and food safety. Practical skills development in year two focuses on the assessment and documentation of abnormal. In Year 3 (FHEQ Level 6) students study the diagnosis, prognosis and treatment of disease across the body systems. They are involved in a year-long research education (one day per week throughout the academic year). Students are introduced to the fundamentals of practice namely imaging, pharmacology, surgery and anaesthesia, communications and professional training. During Year 4 (FHEQ Level 7), students study the role of the veterinarian in various types of animal industries; e.g.

production animal, companion animal, equine and laboratory research. The emphasis is on the role of the veterinarian in maintaining wellness and good health. Two modules allow students to develop skills in surgery, anaesthesia and after-care in live-animal surgical skills training classes. Clinical reasoning and communication skills are developed further with students presenting reflective case reports from their EMS in 4 modules.

- 9.2. Year 5 studies (FHEQ Level 7) comprise intra-mural rotations (IMR) where students further develop their clinical and professional skills whilst hosted by partner practices. Each IMR rotation is of 4 weeks (table 9e); each student undertake three rotations in small animal practice (including emergency and critical care), one rotation in equine first opinion practice and one rotation in farm animal practice. A combined pathology/public health rotation is the sixth core rotation. Additionally, each student chooses two 4-week elective rotations allowing them to tailor their IMR experience to individual career objectives. One elective rotation has been classified as a core elective rotation and students may train in one of the four core rotations (small animal, equine, farm animal and pathology/public health). The other elective is a special interest elective in which students select from a variety of rotations including a variety of clinical electives, research electives and potentially a business-based elective.
- 9.3. Veterinary public health and food hygiene (table 9b) is introduced in Year 1 (Animals in Society I) and has explicit recognition in Animals in Society II (Year 2) which includes food safety, HACCP, abattoir practice, food manufacturing and regulation. These themes are developed further in Year 4 (Contemporary Issues in Veterinary Medicine) and in the Year 5 intra-mural rotation in Veterinary Pathology and Public Health, which includes abattoir and food processing plant visits.
- 9.4. Alignment of learning outcomes between individual units of study, programme, RCVS Day One Competences and European Directive 2013/55/EU is assured by the Board of Studies chaired by the Programme Leader. Curriculum mapping is undertaken within the School to inform this work.

Management of the curriculum

- 9.5. In compliance with the <u>University Code of Practice for Academic Governance</u> the BVMSci Board of Studies (chaired by the Programme Leader) oversees, monitors and modifies the curriculum. Actions approved by the Board of Studies which require Faculty or University-level support are passed first to the Faculty Learning and Teaching Committee for discussion. This body may then approve suggested modifications or forward them for consideration by the Quality and Standards sub- committee and, if necessary, the University Learning and Teaching Committee. Students are represented at each level (School, Faculty, and University) by annually-elected representatives (table 9a).
- 9.6. Quality enhancement is assured through the University's formal <u>Annual Programme Review</u> process. This process, led by the chair of the Board of Studies, considers management information reports (e.g. progression rates, MEQ scores), and feedback from staff, students, clinical partners and external examiners and develops an action plan to ensure the continuous enhancement of programme quality.

Table 9a: School specific committees (red box) within the University teaching governance framework



Extra-mural studies (EMS)

- 9.7. The EMS coordinator has oversight of all EMS provision, with primary responsibility for animal husbandry and preparatory clinical EMS. The Director of Clinical Education (DCE) coordinates clinical EMS. The team of VCTFs is responsible for personal tutoring of all 4th and 5th year students allowing an integration of clinical experience gained through EMS and IMR. A member of the University student services team will continue to support EMS coordinators. Personal tutors are responsible for providing guidance, for monitoring placements via the RCVS student experience log (SEL) and receiving feedback from providers. Processes and requirements (table 9d) are explained to students through talks during induction week, the EMS Placements Handbook meetings with their personal tutors, drop-in sessions with the EMS coordinators and comprehensive information on the student Virtual Learning Environment.
- 9.8. To prepare students for EMS, specific teaching sessions are timetabled to cover relevant knowledge and skills (e.g. lambing, calving) and to broaden their knowledge of the commercial, ethical and welfare pressures affecting animal enterprises. Aspects of professionalism (communications, well-being, financial management, and ethics) are covered early in the course (The Veterinary Professional module VMS1002, Semester 1, Year 1) in preparation for EMS. Students are encouraged to bring their EMS experiences into the classroom; it is particularly encouraged in problem-based learning classes.
- 9.9. Placement providers, sourced by students, are required to sign a placement agreement form which clearly defines roles and responsibilities. With the permission of the placement provider, their details are added to a database that is available to all students. Student

feedback on placements is used to monitor suitability of the provider; this is monitored by the EMS team using SEL entries. Feedback from placement providers on student performance is provided on forms that are copied to the SEL and which are monitored by the EMS support team and personal tutors.

9.10. The value of EMS training is further embedded in the curriculum as part of an assessed program of work in Year 4 which encourages students to further develop clinical reasoning skills. In the relevant Year 4 modules, students on clinical EMS placements are expected to document a case that they have seen for each of the core species. These are then presented as part of a clinical case discussion for the respective modules and are assessed by an academic member of staff. Furthermore, the pre-clinical curriculum includes an assessed animal husbandry audit based on an AHEMS placement.

Electives

9.11. Special interest electives (SIE) are offered across a range of subjects including, but not limited to, clinical specialisms. There is scope to include electives at the University's overseas partner institutes (North Carolina State University, University of Sao Paulo). All SIE have a school-based academic supervisor who will be responsible for summative assessment.

Teaching in abattoirs and food production facilities

9.12. Veterinary public health teaching provides students with a deeper understanding of the food processing industry from "farm to fork." The role of the veterinarian as a supervisor for quality assurance in the food processing chain is experienced through site visits and epidemiological data set evaluation. Students receive practical instruction in food hygiene policies, practise and regulatory legislation as well as undertaking PBL-based investigations of food-poisoning outbreaks. Small group teaching sessions covering the slaughter and preparation of single animals are delivered within a custom-built facility. These sessions complement observation of processes in commercial meat plants.

	Module Title	Module Code	Credits	Lectures	PBL, Tutorials	Online & Other	Labs & Practical's	Clinics	Total	EMS
	Animals in Society 1	VMS1001	15	33		3	41		77	
	The Veterinary Professional	VMS1002	15		24	35	9		68	
T .	Structure and Function 1: Cells and Genes in Context	VMS1003	15	34	6		12		52	
Year 1	Structure and Function 2: Integument and Alimentary Systems	VMS1004	15	27	6		18		51	
	Structure and Function 3: Cardiovascular, Respiratory and Musculoskeletal Systems	VMS1005	15	33	6		28		67	AHEMS

Table 9b: Digest of units of study (hours)

	Structure and Function 4: Haemopoietic and Neurological Systems	VMS1006	15	24	6		19		49	
	Structure and Function 5: Urological and Reproductive Systems	VMS1007	15	27	6		15		48	
	Structure and Function 6: Organs of Special Senses and Endocrine Systems	VMS1008	15	22	6		13		41	-
	Animals in Society 2: Concepts in Epidemiology and Public Health	VMS2008	15	32			28		60	
	Madula Titla	Module	One dite	1	PBL,	Online	Labs &	Olivias	Tatal	1
	Module Title	Code	Credits	Lectures	Tutorials	& Other	Practical's	Clinics	Total	
	Animals in Society 3	VMS2010	15	38			24		62	
		11102010	.0	50			27		52	
	General Pathology and concepts of infectious disease	VMS2009	15	37		6	25		68	
Year 2	Foundations of Disease 3: Pathology of the Integument and Alimentary Systems	VMS2003	15	34	6		11		51	
	Foundations of Disease 4: Pathology of the Cardiovascular, Respiratory and Musculoskeletal Systems	VMS2004	15	30	6		14		50	
	Foundations of Disease 5: Pathology of the Haemopoietic and Neurological Systems	VMS2005	15	35	6		12		47	
	Foundations of Disease 6: Pathology of the Urological and Reproductive Systems	VMS2006	15	34	6		9		49	
	Foundations of Disease 7: Pathology of the Organs of Special Senses and Endocrine Systems	VMS2007	15	39	6		12		57	-
	Veterinary Research Project	VMS3009	15	5	10		31		46	
	Veterinary Research and Evidence Based veterinary Medicine	VMS3008	15	20	22				42	
Year 3	Fundamentals of Veterinary Practice 1: Introduction to Pharmacology, Anaesthesiology, Imaging and Surgery	VMS3002	15	37			27		64	CEMS
	Clinical Practice 1: Diagnosis, Prognosis, Treatment - Integument and Alimentary Systems	VMS3003	15	40			16		56	

	Clinical Practice 2: Diagnosis, Prognosis, Treatment - Cardiovascular, Respiratory and Musculoskeletal Systems	VMS3004	15	40			20		60	
	Fundamentals of Veterinary Practice 2: Practice Management, Ethics, Law, Communications and Career Choices.	VMS3005	15	20		38	4		62	
	Clinical Practice 3: Diagnosis, Prognosis Treatment - Haemopoietic, Neurological, Endocrine and Organs of Special Senses	VMS3006	15	37			20		57	
	Clinical Practice 4: Diagnosis, Prognosis, Treatment - Urological and Reproductive Systems	VMS3007	15	33			30		48	
	Fundamentals of Veterinary Practice 3 – Spay and Neuter Clinic	VMS4001	30	66				30	96	
	Clinical Module 1: Intensive Production and Laboratory Animal Systems	VMS4002	15	42				13	55	-
	Clinical Module 2: Equine	VMS4003	15	33				42	75	1
Year 4	Contemporary issues in Veterinary Medicine: Emerging Diseases, Public Health and Sustainability	VMS4004	15	30			30		60	
	Clinical Module 3: Companion Animal	VMS4005	15	33				27	60	
	Clinical Module 4: Production Animal	VMS4006	15	33				32	65	1
	Wildlife Health and Disease	VMS4007	15	30	12			18	60	1
	Small Animal General Practice 1 Small Animal General Practice 2 Small Animal Referral Surgery,									
Year 5	Anaesthesiology, Imaging and Neurology Equine General Practice	VMS5001	001 120	0	135	120	945	5 1:	1200	
	Production Animal									
	Veterinary Pathology and Public Health									
	Core Elective									

-				
	Specialist Interest			
	Ele ettere			
	Elective			

Table 9c: Digest of discipline and subjects (student hours in courses)

Subject	Lectures	Tutorials, Seminars, PBL, Workshops	Online and other	Labs and Practical's	Clinical	Total
	(1)	(2)	(3)	(4)	(5)	
Basic Subjects & Sciences						
Anatomy, histology, embryology	59.1	5	19.3	70.2	0	153.6
Biochemistry	9	0	0	0	0	9
Biology, cell biology	17.9	1.5	0.7	6	0	26
Chemistry	0	0	0	1	0	1
Physiology	37.2	3	0	9.1	0	49.3
Molecular biology	0.5	0	0	2	0	2.5
Scientific method	0	0	0	6	0	6
Biostatistics	5	0	0	10	0	15
Genetics	12.3	3	0	0.7	0	15.9
Epidemiology	2	6	0	4	0	12
Immunology	11.3	0	0	2	0	13.3
Microbiology	33.9	7	4.4	4.7	15	65
Parasitology	19	7	0	10.5	0	36.5
Pathology, pathophysiology	43.3	17.2	7.9	16.2	15	99.6
Pharmacology	10.8	1.5	0	5.3	0	17.7
Pharmacy	0.5	0	0	2	0	2.5
Toxicology	1.5	0	0	0	0	1.5
Environmental protection and conservation	2	0.3	0	1.3	0	3.7
Animal Production						
Agronomy	1	0	0	2	0	3
Animal nutrition	19	1.1	1.4	9.6	0	31.2
Animal husbandry & production, incl. aquaculture	10.4	1.1	1.4	29.1	0	42
Livestock production economics	5.9	0.3	0	5.9	0	12.1
Animal behaviour & behavioural disorders	9.4	1.1	1.4	10.8	0	22.7
Animal protection & welfare	14.3	1.8	1.4	44.7	0	62.1
Preventative vet medicine, health monitoring	25.2	1.8	1.4	22.9	0	51.2
Reproduction & obstetrics	38.8	4.6	2.8	33	0	79.3
Clinical Subjects				<u> </u>	I	
Anaesthesia	18.6	7.7	26.3	15.7	93.3	161.6
Clinical examination & diagnosis	43.9	22.5	29.7	40.5	93.3	230
Clinical pathology	19.1	13.5	33.7	12.5	108.3	187.1
Diagnostic imaging	32.5	10.1	26.3	23	93.3	185.2
Clinical medicine	59.6	11.2	28.3	39.7	93.3	232.1
Surgery	33.2	7.9	26.3	16	93.3	176.7
Therapeutics	30.8	9	26.3	22.7	93.3	182.1
Emergency & critical care	15.3	14.6	51.4	20.4	186.7	288.3
Exotic & epizootic disease	8.9	1.2	0.6	5.7	0	16.3
Zoonoses & public health	28.5	5.5	6.8	23.5	15	79.4
Government veterinary services	3.1	1.8	4.6	4.3	15	28.8
Food Hygiene						
Veterinary certification	3.1	1.8	4.6	4.3	15	28.8
Regulation & certification of animal & animal products	5.1	1.8	4.6	6.3	15	32.8
Food hygiene & quality	5.1	1.8	4.6	8.3	15	34.8
· · · · · · · · · · · · · · · · · · ·	5.1			0.0		01.0

Professional Ethics & behaviour	13.8	34.1	27.5	17.6	0	93
Veterinary legislation	3.6	11.8	5.6	4.3	0	25.3
Communication skills	3.3	26.4	5.3	10.9	0	45.9
Practice management & business	1.8	29.6	2	3.8	0	37.2
Information literacy & data management	7.8	8.7	10	2.2	0	28.7

Table 9d: EMS requirements

	Minimum Duration	Year of Programme
Production animal farm experience (pre-clinical)	4 weeks (2 weeks lambing + 1 week dairy + 1 week other farm practice)	1 or 2
Companion animal preclinical experience	2 weeks	1 or 2
Clinical – companion animal	4 weeks (2 weeks Preparatory Clinical EMS + 2 weeks Clinical EMS)	End of year 2 or in year 3 (Preparatory Clinical EMS only) year 3, 4 or 5(Clinical EMS)
Clinical – production animal	4 weeks (2 weeks Preparatory Clinical EMS + 2 weeks Clinical EMS)	End of year 2 or in year 3 (Preparatory Clinical EMS only), year 3, 4 or 5 (Clinical EMS)
Clinical – other	4 weeks equine (2 weeks Preparatory Clinical EMS + 2 weeks Clinical EMS)	End of year 2 or in year 3 (Preparatory Clinical EMS only), year 3, 4 or 5(Clinical EMS)
Food hygiene, abattoir	2 weeks – Veterinary Pathology and Public Health	Year 3, 4 or 5
Other (aposity)	Max of 6 weeks Clinical EMS allowed for Research Project EMS (but not a requirement)	Year 3, 4 or 5
Other (specify)	Max of 2 weeks Clinical EMS allowed for conference attendance (but not a requirement)	Year 3, 4 or 5

Table 9e: Year 5 Clinical Rotations

	List of Individual Rotations	Duration	Year of Programme
Core Rotations – Internal	Veterinary pathology & public health	4 weeks	5
Core Rotation - External	Small animal primary care I Small animal primary care II Production animal health Equine primary care Small animal referral Core elective (small animal primary care OR equine primary care OR production animal)	4 weeks	5
Special interest elective Rotations, students to choose one of:	Production/Farm Intensive Production Equine (medicine/surgery/anaesthesia) Non-traditional companion animal Zoological medicine Wildlife conservation	4 weeks	5

Anaesthesia (mixed species)	
Small animal medicine (incl cardiology)	
Small animal surgery (incl oncology, neurology)	
Charity Practice/Shelter Medicine	
Diagnostic Imaging	
Business	
Research	
Pathology/VPPH	

Comments

- 9.13. The curriculum is designed clearly, resourced and managed to ensure the current numbers of graduates achieve the attributes expected of a degree programme at level 7 in the European Qualifications Framework.
- 9.14. The learning outcomes for the programme form a cohesive framework and are clearly communicated to staff and students. There is a clear process through a formally-constituted committee structure, the Curriculum Committee and Board of Studies, which includes effective student representation, through which learning objectives are reviewed, managed and updated.
- 9.15. In addition, the Curriculum Committee and Board of Studies oversee quality assurance of the curriculum, making changes and responding to feedback from stakeholders, external examiners and data from examination/assessment outcomes. Module evaluation questionnaires are completed by students for each module providing feedback on content and the quality of module delivery.
- 9.16. The content of the curriculum is appropriate for an undergraduate veterinary course.
- 9.17. The Year 5 curriculum is unique within UK veterinary education and uses practice-based Clinical Instruction Mentors (CIMs) to provide preceptorship of all professional clinical and non-clinical activities under the supervision of the University's Veterinary Clinical Teaching Fellows (VCTFs). Training of CIMs and VCTFs is appropriate and from the student case and skills logs the year 5 clinical teaching appears effective in delivering Day 1 Competences. Achievement of Day 1 Competences by students is documented by the students throughout the final year as an element of the must-pass portfolio.
- 9.18. There is variability in provision of computers, textbooks and student study areas at the various placements. In addition, there is variability between placements regarding the pre-placement review of learning objectives and the delivery of feedback to the students on rotation.
- 9.19. Extra Mural Studies (EMS) are clearly incorporated into the curriculum. There is a clear requirement for extramural farm animal husbandry practical work to complement students' attainment of an understanding of livestock and farm systems.
- 9.20. There is effective use of the Student Experience Log (SEL), monitored by tutors, to enable EMS providers to return feedback to the school on the performance of students during EMS

and for students to review their placements. Use of the SEL also facilitates the setting of learning objectives and the maintenance of a reflective log of students' EMS experience

9.21. There is an effective team managing EMS and IMR placements including a member of the academic staff responsible for the overall supervision of all types of EMS. This process also ensures that the appropriateness of individual placements for student teaching is kept under review.

Recommendations

None

Suggestions

- 9.22. The School should ensure appropriate and consistent provision of computers, textbooks and student study areas at the various IMR placements
- 9.23. The school should ensure that pre-placement review of learning objectives and the delivery of feedback to students on rotation between placements is consistent.

Standard 10 – Assessment

Management

The institution must ensure that there is a clearly identified structure within the school showing lines of
responsibility for the assessment strategy to ensure coherence of the overall assessment regime and to
allow the demonstration of progressive development across the programme towards entry level
competence. The strategy must be underpinned by robust quality assurance mechanisms.

Policy and Regulation

- The assessment tasks and grading criteria for each unit of study in the programme must clearly be identified and available to students in a timely manner well in advance of the assessment.
- Requirements to pass including the effect of barrier assessments must be explicit.
- Mechanisms for students to appeal against assessment outcomes must be explicit.
- The school must have a process in place to review assessment outcomes and to change assessment strategies when required.

Assessment methods and design

- Programme learning outcomes covering the full range of professional skills and attributed must form the basis for assessment design and underpin decisions on progression.
- Assessment must inform student learning and students must receive timely feedback.
- Assessment load must be planned and managed to achieve appropriate workloads for students and staff.
- Assessment strategies must allow the school to certify student achievement of learning objectives at the level of the programme and individual units of study.
- Methods of formative and summative assessment must be valid and reliable and comprise a variety of approaches. Direct assessment of clinical skills (some of which may be on simulated patients), must form a significant component of the overall process of assessment in the clinical disciplines.

Assessment standards and quality assurance

- There must be procedures in place to maximise the fairness, validity and reliability of assessment outcomes, including but not limited to academic peer review of assessment content, proofing of scripts, supervision and invigilation, maintenance of records and moderation processes.
- Schools must have appropriate moderation processes in place to ensure parity within and between
 individual units of study, across the programme, with other institutions, and to ensure that each student is
 fairly treated.
- The school must be able to demonstrate that there are appropriate measures in place to ensure that grades awarded reflect an appropriate standard of performance by students against the relevant learning objectives.

Background

Management

10.1. The assessment of all programmes offered by the University of Surrey is overseen at multiple levels (School, Faculty and University). In the School of Veterinary Medicine clear lines of responsibility have been established to deliver a robust assessment process.

Policy and Regulation

10.2. Programme assessment sits within the quality control and quality assurance frameworks managed by the University's Directorate of <u>Quality Enhancement and Standards</u>. Validity, reliability, impact on future learning and practice, acceptability to students and staff are all taken into consideration when determining the choice of assessment tool to be used. Chosen methods of assessment are considered by the school to be appropriate and relevant to the learning outcomes being evaluated and staff are trained in these assessment methods. The <u>University Code of Practice for Assessment and Feedback</u> specifies in paragraph 27: "For each programme, the learning outcomes determine the overall assessment regime for the programme, integrating the learning outcomes of its component modules and including the assessment of a balance between specific and generic learning outcomes. It is important that the purposes and requirements of the various units of assessment within a module are correlated, to ensure that the intended learning outcomes of the module are all evaluated, and that there is no unnecessary duplication within and between modules."

Clinical skills

- 10.3. Handling skills in the 'core species' in the year 1, semester 1, Animals in Society 1 (AS1) module are 'must pass' barriers prior to students commending EMS. During the AS1 module, students are provided with the opportunity to demonstrate competences formatively prior to a summative assessment. A new second year module in animal handling and husbandry (AS3) extends and consolidates these skills in the core species and in additional species.
- 10.4. Acquisition of clinical skills that fall within RCVS Day One Competences has been mapped across years 1-4 of the programme. Miller's Pyramid of assessing clinical competence has been used to define expectations at each level of assessment. In addition, a comprehensive list of clinical skills aligned to IMRs is used to guide and record clinical skills development of the students across the final year.
- 10.5. These are assessed using Objective Structured Clinical Examinations (OSCE) and Mini Clinical Evaluation Exercises (Mini-CEX) at various levels in the programme. The students are also required to keep a portfolio of achievement to record attainment of technical skills and reflections on cases observed during IMR. The web-based portfolio is used both formatively and summatively during final year. During IMR placements students receive 360-degree feedback on clinical and professional skills from staff and clients in their host practices. This forms part of the assessed portfolio. Achievement of RCVS Day One Competences is assessed at the end of Year 5 in three components (portfolio, mini-clinical exams/structured oral examinations, and a theory exam).

Support of student learning

10.6. School assessment strategy involves the provision of timely formative feedback to students allowing this to feed forward into improved performance. Formative assessment and provision of feedback is illustrated by: Student use of self-compiled, staff-selected MCQs as 'self-tests' in VMS1002; individual feedback on animal handling skills and professionalism in

VMS1001 followed by a whole class debriefing session; and in Year 3 students receive individual written feedback and a whole-class debrief on formative OSCEs prior to their use in summative assessments. Several RCVS Day One Competences that develop in an incremental fashion over five years are assessed at different stages of the programme e.g. communication skills, clinical examination, surgical skills. Sequential assessment of these competencies is used to demonstrate progression towards entry level competence. Continual structured assessments and feedback supported by practice mentors and Veterinary Clinical Teaching Fellows is a central feature of the IMR in final year. The VCTFs provide formative support for all the assets in the IMR student portfolios in addition to other rotation activities.

Student understanding of assessment tasks and criteria

10.7. Information regarding assessment format is maintained by the module leader and is available to students on the University of Surrey's Virtual Learning Environment. Module descriptors include module learning objectives, a description of assessment methods, assessment weighting and appropriate guidance. At the start of each semester students attend a session with the Programme Leader to brief them on updates and changes to assessment tasks in the forthcoming semester.

Assessment burden

10.8. The student assessment burden is managed through the Board of Studies; e.g. in response to feedback from external examiners and the Staff Student Liaison Committee. Staff workload during assessments is managed by the Programme Leader and Head of Veterinary Education who ensure that duties are fairly distributed amongst staff and that deadlines are met. Assessment calendars are compiled and scrutinised by the year leaders with oversight by the Curriculum Committee to ensure student and staff assessment workloads are appropriate. The centralised University Assessments Office provides administrative support.

Assessment strategy, implementation and review

10.9. Strategy is developed and implemented by the Head of Veterinary Education. Implementation is through Board of Studies and module leaders. Strategy is reviewed by the Department of Quality Enhancement and Standards for compliance with University policy and national quality assurance standards. Exemptions can be granted where the requirements of professional bodies vary from University policy.

Quality assurance

10.10. Validity and reliability is assured through the University's <u>Code of Practice for Assessment</u> and Feedback (paragraphs 25 – 29). The code gives clear guidance on linking learning outcomes with assessment criteria and methods. Reliability of assessments depends upon the correct implementation of validated assessment methods. This is monitored by the Head of Veterinary Education, Board of Studies (chaired by Programme Leader) and external examiners.

10.11. There is an annual examination question analytics workshops for all module coordinators during the summer. The outcome of this workshop is a report on the performance of examination questions during the previous academic year. The report, highlighting potential strengths and weaknesses of teaching or of examination questions, and remedial actions is reviewed by Curriculum Committee.

Award of grades

10.12. The <u>Code of Practice for Assessment and Feedback</u> gives guidance on grade descriptors at FHEQ levels 4, 5, 6 and 7 in Appendix 1. University grading rubrics are used where applicable, in some highly subject-specific assessments, e.g. during IMRs bespoke grade descriptors are used.

Staff training

10.13. Summative assessment of externally-hosted IMRs is undertaken by University staff (Veterinary Clinical Liaison Tutors) who have been trained; some recent recruits are currently undergoing training. Practice-based Clinical Instruction Mentors are trained to deliver formative assessment feedback and multi-source feedback through a bespoke training module developed with the Department of Higher Education.

Appeals process

10.14. The Office for Student Complaints, Appeals and Regulation (OSCAR) is responsible for the administration of academic appeals. Students may submit an academic appeal on one or more grounds: i) procedural error, ii) <u>extenuating circumstances</u>, iii) bias. Appeals are submitted via an online portal which also directs the student to relevant regulations and available support. Staff within the Student Union are available to assist students during this process. The process for academic appeals has been benchmarked against the Office of the Independent Adjudicator's <u>Good practice framework for handling complaints and academic appeals</u>.

Comments

- 10.15. There is a clearly identified structure within the school and University for managing the assessment strategy and evidence of progressive development through the programme towards achievement of Day One Competences. The strategy is underpinned by robust quality assurance mechanisms.
- 10.16. The assessment tasks, grading criteria and any appropriate barriers for each unit of study in the programme are clearly identified, appropriate and available to students in advance of any assessment.
- 10.17. Mechanisms for students to appeal against assessment outcomes are explicit.

- 10.18. There is clear evidence that assessment outcomes are reviewed through the annual module report and evidence that assessment strategies have been changed when required.
- 10.19. Assessment design is blueprinted against learning outcomes, informs student learning and students receive timely feedback in line with University policy. Methods of assessment are evidence based and comprise a variety of approaches.
- 10.20. Staff assessment load is planned and managed by Departmental heads.
- 10.21. Assessment strategies allow the school to validate student achievement of learning objectives at the level of the individual module, year and programme.
- 10.22. There is a comprehensive direct (formative) assessment of clinical skills, knowledge and professional attributes during the final year intramural rotations. Summative assessment is in the form of the Clinical, Oral, Practical assessments in the return weeks.
- 10.23. Fairness, validity and reliability of assessments is evidenced through the use of external examiners and a comprehensive assessment moderation programme which ensures parity across the programme and with other institutions.

Recommendations

None

Suggestions

10.24 The School should consider enhancing the construct validity of summative assessment of students' clinical ability.

Standard 11 – Research programmes, continuing and higher degree education

- The veterinary school must demonstrate significant and broad research activities of staff that integrate with and strengthen the veterinary degree programme through research-led teaching.
- All students must be trained in scientific method and research techniques relevant to evidence-based veterinary medicine. All students must have opportunities to participate in research programmes.
- Veterinary schools must provide advanced postgraduate degree programmes, internships, residencies and continuing education programmes that complement and strengthen the veterinary degree programme and are relevant to the needs of the profession and community. Programmes and the numbers of students in them must be commensurate with the facilities, clinical and other resources and staff.
- 11.1. Summary of research success to date:
 - Research awards over £9 million, from a broad range of funders including charities, research councils and industry
 - Over 500 peer reviewed publications co-authored by Vet School academic staff since 2014
 - Ranked in top 100 universities in the world in Veterinary Science Research in Shanghai International ranking 2017
 - Excellent engagement and high student pass rate in BVMSci Year 3 research module
- 11.2. The School currently offers one postgraduate taught Masters programme (MSc in Veterinary Microbiology table 11b) and has a growing PhD training programme. The MSc programme was recently successfully re-validated for a further five years.
- 11.3 Further postgraduate training is a specific priority for development. Continued access in securing external grant awards and philanthropic funding is providing the necessary financial resource. These include the Longhurst legacy studentships, success in the University Doctoral College Studentship Schemes, and recent applications from the school for large doctoral training programmes from UKRI (Artificial intelligence and Animal Health) and the Wellcome Trust (Neglected Tropical Diseases) that will attract veterinarians interested in undertaking PhDs. Permanent staff also have the opportunity to undertake a PhD by publication where appropriate.

Table 11a: Postgraduate clinical training (residents)

Discipline	No. of residents	Diploma anticipated
Behaviour Medicine	1	Dip. ECAWBM

Table 11b: Postgraduate programmes

Qualification	No. of students on taught courses	No. of students by research	Duration of training	
Masters level				
MSc in Veterinary Microbiology	6 FT/7 PT	N/A	1 year FT/ 5 years PT	
PhD				
PhD	N/A	25FT/1PT	3 or 4 years/7 years PT	

- 11.4. The School's cohort of Masters students have no direct involvement in student teaching. Some have volunteered to assist with Open Days and Applicant Days, and some work alongside students undertaking third-year, laboratory-based projects during the research module. Research project and practical class demonstration is always under the supervision of academic staff.
- 11.5. In 2016 the School won an INSPIRE award offered by the Academy of Medical Sciences and Wellcome Trust. This provides funding for various student activities designed to engage and inspire students in biomedical research. The award will be used to fund student summer research projects, a veterinary research careers event and a vHive showcase event.

BVMSci research module VMS3001

11.6. The Year 3 research module provides every student with the opportunity to engage in research. From 2018-19 onward third year students receive training in research methods followed by an opportunity to undertake a research project, clinical audit or knowledge summary. Proposals are provided by School staff, the partner network, including veterinary practices, the Pirbright Institute and the Animal and Plant Health Agency (APHA). Students may engage with on-going projects such as those in vHive and in the Veterinary Pathology Centre. By providing students with one day per week through the entire academic year, they are able to fully engage with all aspects of research: design, data collection, analysis and scientific writing. As research projects are agreed before the end of second year, it also enables enthusiastic students to engage with their research topic before the start of year 3 – for example, through initiating a literature review. Students are supported by practical workshops on subjects including use of citation software, study design and data management and analysis. Engagement from the first cohort was very high; 100% of students passed the module at first attempt.

Continuing Education

- 11.7. The School has been delivering continuing education since 2012. The delivery of industryrelevant short courses, to meet local and national training needs has been a key element of the school's partner engagement strategy. (See table 11c)
- 11.8. The first annual Partner Conference was held in September 2016, a continuing education event for the partnership network that focussed on delivery of clinical teaching. Annual Partner Conferences have been held in 2016, 2017 and 2018 providing a continuing education event for the partnership network that focussed on delivery of clinical teaching.

This annual forum is a platform for engaging partners in veterinary education and to seek their feedback on course content and design.

Table 11c:	Continuing education	courses provided by	y the school in 2017/18
------------	----------------------	---------------------	-------------------------

Events that have taken place:	Date	Delegates	CPD hours per delegate	Total CPD hours
HACCP III course & qualification	22-24/2/17	7	14	98
Elanco/CVS New Grads - Cardiology & Dermatology	25-26/4/17	95	14	1,330
BSAVA (SE meeting)	17/05/2017	35	3	105
OBN Bio Tuesday 'Veterinary Science & Translational Medicine'	06/06/17	40	2	80
Avian Genetics and Immunity	19/06/2017	70	7	140
Med-Vet-Net Association International Scientific Conference	27-29/06/17	150	2.5	375
RCVS Mental Health Awareness CPD	01/08/17	15	7	105
Challenging chickens – Intro'	30/08/17	8	7	56
Canine Rehabilitation Institute	2-4/9/17	21	21	441
Dog Breeding Reform Group Symposium	22/10/17	102	7	714
UoS/FROST Clinical Clubs (8 events)	10/17- 5/18	12 * 8	2	192
HACCP III course & qualification	21-23/2/18	5	14	70
BIRAGS/Robotics Medical Conference 2018 (one- health)	18-20/4/18	200	7	1,400
Bee & Invertebrate Vet Societies	13/5/18	50	7	350
MB Soc: Emerging zoonoses & AMR	2/7/18	200	7	980
Elanco/CVS New Grads - Cardiology & Dermatology	10-11/7/18	95	14	1,330
Westpoint/APHA PME training	26/9/18	11	7	77
British Society of Veterinary Pathology 2018	28-29/09/2018	50	7	350
	1	1	1	8,193

Comments

11.9. The Veterinary School operates a significant research programme that integrates with and strengthens the veterinary degree programme through research-led teaching.

- 11.10. All students are trained in scientific method and research techniques relevant to evidencebased veterinary medicine. All students have opportunities to participate in research programmes.
- 11.11. The School provides advanced postgraduate degree programmes, internships, residencies and continuing education programmes that complement and strengthen the veterinary degree programme and are relevant to the needs of the profession and community. Programmes and the number of students in them are commensurate with the facilities, clinical and other resources and staff, at this stage of the development of the veterinary school.
- 11.12. In REF 2021 Vet school research staff are likely to be returned within the Allied Health unit of assessment. The School is comfortable with this approach and confident that any financial return from the process will be returned to the School proportionately.

Recommendations

None

Suggestions

None

Standard 12 – Outcomes assessment

- In the interests of quality assurance and enhancement, the veterinary school must have mechanisms to gather data routinely to demonstrate that its institutional and educational objectives are being met.
- Specifically, the school must provide evidence that:
 - its strategic goals are appropriate and that it is progressing towards achieving these goals
 - it is complying successfully with its operating plan
 - its veterinary programme is subject to internal and external evaluation and validation processes by long feedback loops (e.g. graduate destination surveys, employer surveys) in addition to the short loops (e.g. unit of study evaluations).
- The school must provide evidence that all its graduates have (or for a new school, will have) achieved the programme's stated learning outcomes, including the level of competence required of an entry-level veterinary (RCVS Day One Competence).
- There must a system for students to keep a record of, and reflect on, their developing practical and clinical skills over the duration of programme. There must be evidence that such experience logs inform the learning and assessment process for individual students, and evidence that the school uses consolidated data to monitor the achievement of competence and experience levels of students across the programme as a whole.
- There must be procedures to review the evidence of student experience and student achievement of Day One Competence, and demonstrate implementation of change on the basis of such review. Outcomes of the review process must be communicated to relevant internal and external stakeholders.
- The school must have a strategy for the continuous improvement of the quality of the veterinary programme.
- In the case of a school that has yet to produce graduates, evidence must be presented that provides RCVS with reasonable assurance that the school's programme outcomes will be achieved. Evidence must be available to show progress to date in achieving the desired outcomes in the programme, and the measures to be taken in the remainder of the programme to ensure their achievement by the completion of the veterinary degree.
- Evaluation of outcomes is the most important source of information to a school about its success and its drive for continued enhancement of quality. However, in contrast to inputs, which are relatively easy to measure, outcomes assessment is more complex. It is easy to become confused by the fact that the same raw data can be repurposed to assess outcomes at the level of the school or at the level of the individual student. This means that everyone involved needs to be clear about the use of data and the presentation of results.
- All schools with an established quality assurance and enhancement culture will evaluate outcomes at school, programme, module and individual student levels. This will be achieved through results in assessments, feedback forms of various types, surveys, publication counts and a host of other measures. Different schools will place emphasis on different measures, but a report on outcomes should include a matrix that employs a variety of different measures providing information relevant to the foci of the other standards. Repetition of the measures over an extended period (at least five years) will then demonstrate progress in each area. Specifically, evaluation of outcomes related to the veterinary programme, individual students (throughout their studies as well as at graduation) and employability must be included, but RCVS will expect schools to include other outcomes evaluations of their choice. In addition, evidence of quality assurance, together with both reactive and proactive quality enhancement will be expected.

Background

- 12.1. Through external consultation with the partnership network and internal dialogue with staff around the School's mission and vision, the outcomes in table 12a have been adopted. This table indicates key performance indicators (KPIs) that are used to measure outcomes and the mechanism for monitoring these data on a periodic basis. Outcome assessment data obtained so far are shown in table 12b.
- 12.2. The School has appointed an Outcomes Assessment Champion, who sits on the Senior Management Team and has oversight of all the Outcomes and the review processes. An Annual Outcomes Review is conducted by the Senior Management Team, where performance against these targets is monitored, KPIs are reviewed and action plans formulated.

Table 12a: Outcomes, key performance indicators and review process

Outcome	Ownership	KPIs/metrics	Data Collection	Forum for Review & Action
1. Achievement of Day One	Head of Veterinary	>95% progression to next level (indicating achievement of programme learning outcomes aligned to and underpinning D1Cs) Head of Veterinary		Board of Examiners and Board of Studies
Competences	Education			Annual programme review
		>80% employer satisfaction with graduate	Post-graduation	5 yearly periodic review
		D1Cs attainment	employers' survey (2 yrs.)	SMT & External Advisory Board (EAB)
l		Number of clinical cases seen in IMR	IMR feedback	Annual Programme Review and Board of Studies
2. Quality	Director of	Practice partners providing IMR will undergo one annual self-assessment and one annual audit performed by the University	Practice Placement Providers Audit	Director of Veterinary
assured partner practices	Veterinary Partnerships	Practice partners will be visited on a fortnightly basis by the Veterinary Clinical Teaching Fellows to provide ongoing monitoring and oversight of IMR provision	Fortnightly VCTF visits to partners	Partnerships, IMR operations group and SMT
		All staff to undertake one peer observation annually	Head of Veterinary Education	SMT and Heads of Department
3. Enhancing the student experience	Head of Veterinary Education	100% of qualifying academic staff to have completed the GCLT within their specified probationary period	Dept. for HE	Heads of Department
-		>90% MEQ scores >4.0	MEQ scores	Curriculum Committee and Board of Studies
	Chair of	90% students employed within 6 months	Graduate destination survey (Dept. Strategic Planning)	Curriculum Committee
4. Employability	Pability Employability Working Group Satisfaction with career choice > 4.0		Post-graduation survey	SMT & EAB
		(Total possible score 5)	Graduate destination survey	Curriculum Committee
5. Understanding and adopting diverse career	Chair of Employability	>10 visitors/guest speakers from non- clinical jobs visiting across the programme	Curriculum audit	Board of Studies & EAB
options	Working Group	% cohort adopting non-clinical jobs post- graduation*	Graduate destination survey	Curriculum Committee
6. Understanding and adopting innovation	Research Director	>95% students passing research module VMS3001 at first attempt	Assessment results	Board of Examiners and Board of Studies
	Top 100 in the world for Veterinary research		International league tables (Shanghai/QS)	Research Director and Research Culture Committee reporting to SMT & EAB

7. Wellbeing	Senior Tutor	<10 % referrals to Wellbeing Centre	Wellbeing Centre Annual	Wellbeing Strategy Group	
		Student satisfaction with health/wellbeing services >3.0 (out of 4)	Report	Senior tutor reporting to SMT	
		Number of cases seen by peer supporters*	Peer supporter feedback	& EAB	
Outcome	Ownership	KPIs/metrics	Data Collection	Forum for Review & Action	
8. Diverse student body	Admissions Tutor	>15 places on WP summer school			
		20% application rate from WP summer school	Widening Participation and Outreach Team	ULTC	
		>10 % conversion of WP applicants			
		Gender & ethnic diversity* (% of student admissions)	Veterinary Admissions Group	- SMT	
9. Institutional outcomes	Head of School	Top three in subject league tables by 2020	HESA data/NSS	Dept. Strategic Planning, reporting to Faculty Executive Board	
		Top quartile REF performance	Internal output review process REF 2021	School Research Culture Committee and Faculty Research Committee	
		Achieve £7.4million in research income by 2021	Research Finance	SMT	

* Benchmarking will be undertaken to derive appropriate targets

- 12.3. The University has a framework of quality enhancement that is used to review performance against some of the outcomes (progression, MEQ scores, student diversity) and to formulate improvement plans:
 - <u>Annual programme review</u> is a process coordinated by University Learning and Teaching Committee, and assessed by the Quality Enhancement and Standards Committee. This process requests data and reflection on clinical student placements i.e. IMR.
 - <u>Periodic review</u> of programmes is also a University requirement. This holistic review is conducted by a panel, including an external appointee, to assure that programmes continue to meet their stated aims and objectives/learning outcomes, and are adequately resourced. The BVMSci programme is scheduled for review in 2019.
- 12.4. RCVS Day One Competences are embedded throughout the programme in the form of specific learning outcomes. Curriculum mapping allows this to be monitored, and the extent to which students have achieved these outcomes is measured in the <u>Annual programme</u> review process.
- 12.5. The assessment strategy (Standard 10) is designed to test various learning outcomes at different stages of the programme. The results of assessments are reviewed by Board of Examiners' meetings, subject to the scrutiny of external examiners and reported to Faculty/University Learning and Teaching Committee. Amongst other metrics, the outcomes of formal assessments are reviewed during the <u>Annual programme review process</u> and addressed in the resulting action plan.
- 12.6. The student experience is monitored through the Staff-Student Liaison Committee which reports to Board of Studies and through Module Evaluation Questionnaires which are reviewed by Board of Studies as part of the Annual programme review. Ultimately the National Students Survey will be used to monitor the student experience across the whole 5-year programme. Outcomes of these review processes are communicated internally through minutes, enactment of action plans, staff meetings, learning & teaching "Away days," and

with external stakeholders through bespoke reporting to our distributed learning community e.g. annual partner conference.

- 12.7. The School has adopted the RCVS Student Experience Log (SEL) for capturing the development of practical and clinical skills during EMS. This is monitored and moderated through discussion with personal tutors. In final year this is augmented by the ePortfolio that underpins IMR, including a clinical skills record, reflective case logs and multi-source feedback from placement providers. These records are reviewed with individual students by Veterinary Liaison Tutors and skills enhancement plans formulated.
- 12.8. Student wellbeing outcomes are monitored at University and School level by the Wellbeing Strategy Group and the Senior Tutors, respectively. Routine communication with the Centre for Wellbeing is maintained by the Senior Tutors, with any concerns being reported to the School SMT where necessary.
- 12.9. RCVS Day One Competences map directly to module learning outcomes; achievement of these is monitored by Board of Examiners which reports to Board of Studies. Consolidated data from this and student experience logs are used by the Head of Veterinary Education to evaluate equality of learning opportunities. Correlation of student achievement with number and quality of practical/clinical learning opportunities allow the School to develop "benchmark standards" for delivery of IMR. Consolidated data will allow inter-cohort comparisons to be made as part of annual programme review.
- 12.10. The School's Strategic Operating Plan articulates five key goals to be achieved by 2020. These include two institutional benchmarks: i) top three of the subject league table for UK vet schools, and ii) top quartile performance in REF 2020. Progress towards these goals is monitored by the University's Strategic Planning Department using HESA data.
- 12.11. The School's strategy for continuous improvement is i) clear identification of staff responsible for quality enhancement (ownership), ii) collection of relevant data, iii) formal review of data and identification of trends, iv) implementation of an action plan, and v) repeat process to monitor success.
- 12.12. Outcomes that can be measured at this stage in the School's development are listed in table 12b with performance data to date.

Outcome	KPI/metric	Performance to date	Risk Rating (G/A/R)
1. Achievement of Day One Competences	>95% progression to next level (indicating achievement of programme learning outcomes aligned to and underpinning D1Cs)	Year 1 to 2 mean progression: 98% Year 2 to 3: 98% Year 3 to 4: 96% Year 4 to 5: 91%	
	Number of clinical cases seen in IMR	3234 cases seen over the initial 2 rotations	

Table 12b: Outcomes assessment to date

2. Quality assured partner practices	Practice partners providing IMR will undergo one annual self-assessment and one annual audit performed by the University	Cohort 1 (2018/19): 100% audited Cohort 2 (2019/20): 100% audited	
	Practice partners will be visited on a fortnightly basis by the Veterinary Clinical Teaching Fellows to provide ongoing monitoring and oversight of IMR provision	As of the initial two rotations (October 2018), all cohort 1 practices have been visited at least once a fortnight by a VCTF	
	All staff to undertake one peer observation annually	2017/18 academic year: 29% complete	
3. Enhancing the student experience	100% of qualifying academic staff to have completed the GCLT within their specified probationary period	As of 2018 all qualifying staff had completed the GCLT within the qualifying period	
	>90% MEQ scores >4.0	2014/15: 100% of modules scored >4.0 (mean score = 4.6) 2015/16: 94% of modules scored >4.0 (mean score = 4.3) 2016/17: 91% of modules scored >4.0 (mean score = 4.3) 2017/18: 77% of modules scored >4.0 (mean score = 4.1)	
		2016/17: 13 externals came to speak to year 1 about non-clinical roles	
5. Understanding and adopting diverse career options	>10 visitors/guest speakers from non-clinical jobs visiting across the programme	2017/8: 5 externals came to speak to Year One and 23 externals spoke to	
		Year 3 about non-clinical roles.	
6. Understanding	>95% students passing research module VMS3001 at first attempt	2016/17: 100% of students passed at first attempt	
and adopting innovation		2017/18: 100% of students passed at first attempt	
	Top 100 in the world for Veterinary research	76-100 in the 2018 Shanghai League table	
	<10 % referrals to Wellbeing Centre	2014/15: 6% of students	
		2015/16: 8% of students	
		2016/17: 8% of students	
		2017/18: 16% of students (benchmark: University rate 12% for	
7. Wellbeing	2016/17: >80% student satisfaction with health/wellbeing services	2017/18) 2016/17: 93% student satisfaction with the Centre for Wellbeing (Overall University value)	
	2017/18: Student satisfaction with health/wellbeing services >3.0 (out of 4)	2017/18: Score of 3.7 (out of 4) achieved for student satisfaction with services	
	Number of cases seen by peer supporters*	42 cases reported by peer supporters between October 2016 and May 2018	
	>15 places on WP summer school	2014: 19, 2015: 15, 2016: 17, 2017: 16, 2018: 25	
	20% application rate from WP summer school with >10 %	2014: 21% applications, 0% conversion	
		2015: 27% applications, 7% conversion	
8. Diverse student body	conversion of WP applicants	2016: 47% applications, 0% conversion	
		2017: 60% applications, 8% conversion	
	Gender & ethnic diversity* (% of student admissions)	Gender: 2014 admission: F 71%, M 29%	

		2015 admission: F 80%, M 20%	
		2016 admission: F 84% M 16%	
		2017 admission: F 82% M 18%	
		2018 admission: F 83%, M 17%	
		(UK Vet student population 2015/16: F 78% M 22%)	
		Ethnicity:	
		2014: 4% Black and minority ethnic (BME)	
		2015: 7% BME	
		2016: 8% BME	
		2017: 9% BME	
		2018: 14.4% BME	
		(UK UG student population 2017 21.8% BME, UK Vet students 2014 4.3% BME)	
9. Institutional outcomes	Achieve £7.4million in research income by 2021	Over £9.3m in research awards secured to date; on target to achieve income by 2021.	

Comments

- 12.12. The School has established nine appropriate key performance indicators towards which it is working in order to provide evidence for the achievement of its mission and strategic objectives. There is clear ownership of the process and evidence of progress towards achieving most of these goals. Where goals are not being achieved there are plans in place to progress to their achievement.
- 12.13. The school has an established quality assurance and enhancement culture which evaluate outcomes at school, programme, module and individual student levels through both long and short feedback loops. Repeated measurements are made and assessment outcomes are used by the School to determine progress towards its strategic goals and to evaluate outcomes related to the veterinary programme and individual students.
- 12.14. The school has a system of internal and external evaluation to document whether students have achieved the programme's stated learning outcomes, including the level of competence required of an entry-level veterinarian (RCVS Day One Competences). This includes monitored student documentation of skills and experience developed in the final year rotations and achievement of Day One Competences recorded within the must-pass portfolio.
- 12.15. Progress to date suggests that the desired outcomes of the programme will be achieved by the completion of the veterinary degree.

Recommendations

None

Suggestions

None



Friday 29th March 2019

Dr Linda Prescott-Clements

Director of Education Royal College of Veterinary Surgeons Belgravia House 62-64 Horseferry Road London SW1P 2AF School of Veterinary Medicine Faculty of Health & Medical Sciences University of Surrey Daphne Jackson Road Guildford, Surrey GU2 7AL

Professor Chris Proudman

Head of the School of Veterinary Medicine

Dear Linda,

Further to your letter to our Vice-Chancellor, and receipt of the final report on the visitation made in February 2019, I am pleased to write in formal response.

On behalf of the University I would like to thank you and your team at RCVS for your help in organising this visitation, particularly the visits to off-site teaching premises, many of which were conducted prior to the visitation week. I would also like to thank the visitors for their diligence in their task and their feedback, both formal and informal, on our veterinary programmes. The University has carefully considered all of the suggestions and recommendations made in the report and has addressed each of these below.

An additional query was raised in relation to Table 4b (ii) of the draft report, namely a request for clarification around companion animal cases seen *per student*. This data has been extracted from student IMR case logs and used to amend column three of this table:

	No. cases			
Companion Animals	No. hospitalised cases*	No. of cases seen by students during IMR (primary contact)#	No. 1 st opinion cases (consultations)*	No. Referral cases (consultations)*
Equine	>3000	66	>60,000	>700
Dogs	>7000	105	>100,000	>6000
Cats	>5000	43	>70,000	>3000
Non-traditional companion animal	>180	6	>5000	N/A

*total annual indicative caseload at partner practices.

#cases seen per student, per year extrapolation from case logs after 4 rotations

Standard 1 – Organisation

Recommendation 1: The School must give immediate attention to providing additional resource to ensure the resilience and sustainability of the IMR rotation management.

Response: The School recognises the need for additional resource to support IMR management and will address this as a matter of urgency. We have completed a review of requirements and are working to provide appropriate resource to ensure a resilient management structure.

Recommendation 2: The School must use a real-time method of recording any deficiencies at partner practices and the consequent mitigations and resolutions. This may include findings from audit, self-

assessment or VCTF observation. These systems must be established with sufficient resource provision to manage audits and effect prompt remediation.

Response: The School will enhance the utility of the current IMR Practice Resources Log through provision of dedicated IMR management support (see response to Recommendation 1). The manager will be trained to undertake practice audits, to record and monitor deficiencies and will be tasked with maintaining an action tracker.

Recommendation 3: The School must continue to ensure that annual external audits of IMR providers continues until the cohort size of the programme stabilises.

Response: The School will continue to undertake an annual external audit of IMR provision at each site in addition to introducing interim, internal self-assessments.

Standard 2 – Finances

There are no recommendations or suggestions.

Standard 3 – Physical Facilities

Commendation 4: The enthusiasm and engagement shown by the partner practices in providing resources for the rotations in final year is commended.

Response: The School thanks the visitors for this recognition of our partner network.

Recommendation 5: Students and staff visiting the white meat abattoir must use suitable PPE and follow Good Hygiene Practices to ensure their own safety and the safety of the food items produced by the abattoir.

Response: The School has already amended requirements for staff and students undertaking abattoir visits and has purchased appropriate PPE following advice from the visitors. School staff will work with the abattoir to ensure that current legislation relating to personal protection and Good Hygiene Practices is adhered to.

Suggestions

Suggestion 6: Efforts to find a FSA-approved white meat abattoir for student visitation should continue in order to replace or complement the facility currently used.

Response: The School continues to seek such a teaching resource.

Suggestion 7: The School should continue monitoring whether adequate space is available for students on campus at peak hours.

Response: The School is committed to ongoing monitoring of space usage with Faculty and University teams to ensure that adequate provision is made for students on the Manor Park campus.

Suggestion 8: The School should ensure that there is sufficient and appropriate dedicated space for the VCTF team to meet tutees either in person or virtually, and/or to have confidential videoconference discussions with them.

Response: The School is working with the University's Head of Strategic Space Management to ensure that adequate, appropriate meeting spaces are available for the VCTF team and other School staff working in the VSM building.

Suggestion 9: The School risk register should continue to be actively reviewed and updated frequently enough to enable monitoring of the risks around scaling up of the programme to ensure effective IMR provision.

Response: The School will continue to update its risk register every 6 months and the IMR Operations Group will continue to review progress against IMR-specific mitigating actions monthly.

Standard 4 – Animal Resources

Commendation 10: The School is commended on the provision of a large and diverse medical and surgical case load through the relationship with partner practices, which includes a high proportion of first opinion cases.

Response: The School thanks the visitors for this commendation which highlights one of the strengths of our model for delivering clinical veterinary education.

Suggestion 11: Steps should be taken to ensure that each student in the following classes has the opportunity to necropsy sufficient numbers of companion and farm animals.

Response: The School continues to grow its pathology service, thereby increasing opportunities for student practical experience. The School also has established alternative routes of acquiring materials to support this requirement.

Suggestion 12: The placement of students in a referral practice before they complete a placement in a primary care practice should be avoided if possible. In the event that this is unavoidable, the School should monitor the students' experience in the referral practice to ensure that there are no untoward impacts on student learning.

Response: The School will seek feedback from multiple sources on this situation to determine any potential detriment to learning.

Standard 5 – Information Resources

Suggestion 13: The School should ensure that students have reasonable access to online resources whilst on IMR rotations.

Response: The School will continue to monitor access to online resources at partner practices through audit and student feedback. We will develop bespoke solutions to any issues that arise.

Standard 6 – Students

Suggestion 14: As cohort size increases, attention should be paid to the workload of VCTFs to ensure they have sufficient time to continue to provide effective levels of pastoral care to both students on IMR and their personal tutees in fourth and final year.

Response: The School will continue to monitor VCTF workload. Additional VCTF posts will be recruited according to the School's staffing plan. Supplementary non-academic, logistic support for IMR management (see Recommendation 1 above) is expected to have a beneficial impact on VCTF workload.

Standard 7 – Admission & Progression

Suggestions

Suggestion 15: The School should place more emphasis on the need for students to undertake compulsory EMS in their own time and at their own expense on the school admissions information pages of the website and in other marketing materials.

Response: The School will work with the University marketing team to place more emphasis on the financial and time requirements of EMS in its admissions information.

Suggestion 16: The School should continue seeking innovative ways to explain clearly to potential applicants what they might expect during IMR rotations.

Response: The School will continue to enhance its communications to applicants about IMR. In particular, it will use student accounts of IMR to build realistic expectations amongst applicants.

Standard 8 – Academic & Support Staff

Recommendation 17: The School must review staffing in mission critical areas to ensure that there is sufficient depth of expertise and experience to ensure that the teaching programme can continue to operate smoothly if key individuals are not available or resign.

Response: The School is in the process of making several staff appointments which, in addition to their primary roles, will provide resilience in key areas of teaching provision. A review of teaching resilience and succession planning will be led by the Programme Director and recommendations made to the Senior Management Team.

Standard 9 – Curriculum

Suggestion 18: The School should ensure appropriate and consistent provision of computers, textbooks and student study areas at the various IMR placements.

Response: The School is committed to providing a standard set of student study resources in all IMR practices. In addition to furniture, a set of rotation-specific, hard-copy textbooks is provided. A range of bespoke IT solutions has been implemented to ensure consistent student access to clinical records and for students to undertake private study. Resource to maintain this provision has been incorporated into the School budget. A laptop loan system will be implemented for any students who do not own a laptop or who have problems with their own laptop.

Suggestion 19: The school should ensure that pre-placement review of learning objectives and the delivery of feedback to students on rotation between placements is consistent.

Response: The IMR Educational Advisory Group has recently reviewed the implementation of preplacement learning objectives during the mid-module review, and has recommended refinements for the 2019/20 academic year. Further training of VCTFs and CIMs in light of these changes will ensure greater consistency of engagement with learning objectives and student feedback.

Standard 10 – Assessment

Suggestion

Suggestion 20: The School should consider enhancing the construct validity of summative assessment of students' clinical ability.

Response: Summative assessment of clinical ability is achieved through a range of established formats. We will continue to monitor validity and once sufficient evidence is available we will make appropriate changes as necessary.

Standard 11 – Research Programmes, Continuing & Higher Degrees

There are no recommendations or suggestions.

Standard 12 – Outcomes Assessment

There are no recommendations or suggestions.

The University is grateful for the suggestions and recommendations made by the visitors and is committed to the continuous improvement of its BVMSci programme. I would like to re-iterate an important point made during the visitation: the School of Veterinary Medicine has the full support of University Council and the University's Executive Board in meeting the RCVS Standards and in its continuing development as a centre of excellence for veterinary education and research.

Yours sincerely,

Professor Chris Proudman

Head of the School of Veterinary Medicine Faculty of Health and Medical Sciences University of Surrey