UNIVERSITY OF CAMBRIDGE
Department of Veterinary Medicine

EAEVE Accreditation Visitation, February 2025

Self-Evaluation Report

CONTENTS

INTRODUCTION

Brief History of the School and previous ESEVT Visitations

The University of Cambridge was founded in 1209 and is one of the world's oldest Universities and leading academic centres with an international reputation for outstanding academic excellence reflecting the intellectual achievements of its students as well as the outstanding original research carried out by the staff of the University and Cambridge Colleges.

The Cambridge Veterinary Programme was established in 1949 and Her Majesty Queen Elizabeth II, opened new buildings on the School's present site on Madingley Road in 1952. The School is accredited by the Royal College of Veterinary Surgeons (RCVS) and the European Association of Establishments for Veterinary Education (EAEVE).

EAEVE last visited the Department as part of the joint 2015 RCVS/EAEVE visitation and found the Department to meet European-wide standards. Following that visit, the Cambridge degree was accredited by EAEVE until 2023. Recommendations and responses from the 2015 visit are presented in *Appendix 1.7 EAEVE & RCVS 2015 Recommendations and Response*. This Visitation SER is written within the context of the ESEVT SOP 2023, approved on 7 June 2023.

Main Features of the School

The veterinary undergraduate programme at Cambridge spans 6 years and is a unique blend of basic sciences (Years 1 and 2) with an intercalated first degree (BA) awarded after completion of a Year 3 outside of veterinary medicine. Students then proceed to Years 4-6 of the veterinary curriculum leading to the award of the VetMB degree. The whole curriculum is overseen by the Veterinary Education Committee, established to ensure overarching management of the veterinary curriculum across all 6 years. Teaching of Years 1 and 2 is delivered as courses largely delivered by Departments in the School of Biological Sciences (Departments of Biochemistry, Pathology, Pharmacology, and Physiology, Development and Neuroscience) although the Department of Veterinary Medicine contributes to both the didactic and practical teaching of Years 1 and 2 and is well represented on steering committees and reviews of these basic science foundation courses. Veterinary undergraduates are taught alongside medicine and natural sciences (biology) undergraduate students in many of these courses, giving a wider perspective on the application of basic sciences and the challenges of 'One Health'. Teaching in Years 4-6 of the veterinary curriculum takes place at the Department of Veterinary Medicine and is delivered to veterinary students only.

Unique to Cambridge is the college supervision teaching where all Year 1 and 2 students receive small group supplementary teaching organised though their college to underpin and reinforce core curricular teaching. The collegiate system provides exceptional and individualised support and mentoring for undergraduate students. Each student has access to academic and pastoral mentoring advice at both academic and professional levels. Individual Cambridge colleges provide Tutors (overseeing pastoral care), Directors of Studies (DoS; overseeing academic development) and Veterinary School Clinical Supervisors (VSCS; overseeing professional development), all of whom oversee individual student academic and professional progress during the programme and provide any required academic, professional, or pastoral support.

The University was awarded Gold in the 2023-24 Teaching Excellence Framework exercise.

In 2017, the Higher Education and Research Act established the Office for Students (OfS) as the higher education regulator in England. The OfS's regulatory framework requires higher education providers to register with the OfS, and registered providers must meet a number of conditions. Cambridge University registered with the OfS in July 2018.
The University of Cambridge meets national requirements for its educational programmes set by external Government bodies including the Quality Assurance Agency (QAA), Higher Education funding Council for England (HEFCE) and the Higher Education Academy (HEA). While the Quality Assurance Agency (QAA) no longer reviews higher education in England, it continues to provide resources for the development, management and review of higher education.

Research achievements
Research in the department is built around a "One Health" model, based on the recognition that substantial overlaps and synergies exist between research in human and animal systems, from infectious disease through host-pathogen interactions to genetics and physiology. This philosophy underpins our interactions and integration with other departments within the School of Biological Sciences (SBS) and across the University.

Main developments since last visitation
Curriculum Reviews
Years 1 and 2 (Preclinical)
The Medical and Veterinary Medical Curriculum Review (MVMCR) was established in 2021 to conduct a comprehensive review of the teaching and assessment in for the first two years of the medicine and veterinary courses. This review critically evaluates course structure, assessment, student development, and educational delivery. Dr Claire Michel was appointed to manage this significant initiative, under the leadership of Dr Holly Canuto.
During the one-year Discovery Phase, the course was thoroughly evaluated, resulting in a series of recommendations. Since then, several cross-course policies have been approved and implemented, including enhanced resources for students to prepare for examinations. The Intended Learning Outcomes for the first two years of the courses have been reviewed and approved.
We have completed in-depth analyses of the physiology, pharmacology, and anatomy subjects, and have initiated similar reviews for neurobiology, biochemistry, and pathology. We anticipate completing the full review, along with implementing most of the recommendations, by October 2027.

Years 4 to 6 (Clinical)
A major review of the Final Veterinary Examination curriculum & assessments was initiated in 2017 and completed in 2019. The proposed changes were agreed by the Faculty Board of Veterinary Medicine, Veterinary Education Committee and the General Board for Education. The new format of Final Veterinary Examinations commenced in Michaelmas 2021 and a new 4th and 5th year curriculum introduced, with the curriculum and assessments fully aligned. The new Clinical Phase (Years 4 and 5) consists of species-based and Veterinary Public Health integrated courses corresponding to the subject examinations at the end of final year. There are two Final Veterinary Examination Part I assessments in each of the six terms; the examinations in the first five terms cover all the work of that term and the two examinations in the 6th term are of Objective Structured Clinical Examinations (OSCEs) and an online test of understanding of the RCVS Guide to Professional Conduct. An e-portfolio of other evaluated work, including EMS placements, was also introduced from October 2020 as part of the new Final Veterinary Examinations Part II (end of final year) and Directly Observed Procedural Skills (DOPS) were introduced as part of the Final

year assessments in 2022. The students who graduated in June 2024 were the first cohort to have completed this new curriculum and assessment.
The number final year rotation weeks has been increased from 22 to 26 weeks over the period from 2022 to 2024 with additional weeks on RSPCA, First opinion – Hospital based, Cardiology and Clinical pathology/pathology.

Governance
In 2023 the oversight and governance of the Curriculum changed as a result of the resignation of the Director of Teaching, who has been replaced by the Deputy Head of Department for Education, with operational teaching matters being overseen by a Teaching Operations Committee which reports to the Veterinary Education Committee (see *Appendix 3.4 Teaching Committees and ToR*).

Clinical Skills
The Clinical Skills Centre (CSC) comprising the Pauline Brown Clinical Skills Centre and Merton Hall Farm) was established for the teaching and learning of a wide range of evidence-based, practical and clinical skills related to veterinary medicine, across all years of the veterinary medicine programme. From its opening in 2013 the CSC have developed an extensive range of teaching models and resources for the delivery of the formal Small Group Clinical Practicals, and provision of opportunities for self-directed learning and practice of clinical skills 24/7. The CSC has become an integral part of the Department, as well as a contributor to pedagogical innovation for the wider veterinary clinical skills community. The recent refurbishment of the Large Animal Unit (2023 – 24) has provided additional bespoke teaching spaces for clinical skills and for OSCE assessments.

Refurbishment of LT1 providing padded seats, new floor coverings, increased number of charging sockets was completed in 2023.

Completion and opening of West Hub, adjacent to the Department's main buildings in 2023. This building provides state-of-the art, bespoke teaching and study spaces, meeting rooms, catering facilities, and houses the veterinary library collection.

Research
In common with other UK Universities, the department contributed to the UK's Research Assessment Exercise in 2021. This assesses the research activities of different Units of Assessment (UoA) across the University against criteria for Outputs, Impact and Environment. The department was returned as a single UoA, and the results showed that we improved our scores for Outputs and Impact over our previous REF outcomes, and also improved our (unofficial) ranking relative to other UK Veterinary Schools for Overall rank, Outputs rank and Impact rank. We returned 52 FTEs (including many research-active teaching staff) and achieved scores of 52.3% 4* (93.1% 3* + 4*) for Output, and 60% 4* (90% 3* + 4*) for Impact. We increased our ranking on both of these measures and achieved a ranking of third amongst Veterinary Schools in the UK for average outputs (second for 3* + 4*outputs). Set against this, our scores for Environment decreased over our previous outcomes to 25% 4* (87.5% 3* or 4*). Overall, this reflects a significant increase in the strength and quality of our research.

Our research base has continued to expand since the REF2021 submission. This can be demonstrated by looking at our annual grant income, which has been steadily increasing over the

last 6 years, with the three years since the REF build-up all being better than the three years before. Our number of publication outputs also continues to increase year-on-year, again with a notable improvement from before to after the REF submission. Departmental publications since 2018 have been cited>59,000 times, with an average of 37.5 citations per publication, and 65 of our papers have been cited >100 times.

Major problems encountered by the VEE

Financial: working within the constraints of the University finance systems and impact of COVID to deliver against a 5-year Hospital business plan, ultimately resulting in closure of the equine referral Hospital and a General Board Review.

Area 1. Objectives, Organisation and Quality Assurance Policy

Standard 1.1: The VEE must have as its main objective the provision, in agreement with the EU Directives and ESG Standards, of adequate, ethical, research-based, evidence-based veterinary training that enables the new graduate to perform as a veterinarian capable of entering all commonly recognised branches of the veterinary profession and to be aware of the importance of lifelong learning. The VEE must develop and follow its mission statement which must embrace the ESEVT Standards.

The mission of the Department of Veterinary Medicine is to provide global leadership in veterinary education, discovery and clinical care to equip our students with the essential skills to thrive in a rapidly changing profession in a world under pressure from climate change. We achieve this through inspirational teaching and training, outstanding basic and clinical research, and integration of these to improve the health and welfare of animals and people in the context of the environment they live in.

Aims
The Department of Veterinary Medicine, through inspirational teaching and training, aims to educate individuals who:

- will become exceptional veterinary surgeons, biological scientists, or policy makers
- combine deep scientific understanding with outstanding clinical and communication skills
- demonstrate a caring, compassionate and professional approach to their patients and the public
- are equipped to become international leaders of their profession.

Through its commitment to the pursuit of excellence, and support of scientists of international standing in basic and clinical research, the Department of Veterinary Medicine aims to:

- understand fundamental biology and thereby the mechanisms underlying disease
- integrate basic and clinical research
- apply a rigorous mechanism-based approach to clinical problems
- innovate to solve the One Health challenges of our society.

Values
We are committed to clinical excellence, scientific excellence, and to create a positive, nurturing, supportive and collaborative environment for all members of the department.

Our core values are:

- to uphold the rights of the individual to freedom of thought, freedom of expression, and access to education;
- to foster, and always strive to improve, a culture that respects the diversity of our students, academics and non-academic staff, and value their different expertise and contributions to the life of the Department;
- to instil in our graduates, staff and alumni a life-long passion for the pursuit of excellence in veterinary medicine and an understanding of their responsibility to engage with the public about their research.

Staff Support
Our staff are our most valuable asset, each playing a vital role in the success of the Department. We are committed to fostering an environment characterized by:

- Trust, collaboration, and transparency.
- A sense of belonging for all staff.
- Integration of health, safety, and well-being into daily practices.
- Support for personal development.
- Collectively strive for excellence as individuals, teams, and as a Department.

Curriculum review

Through a continuous process of review and improvement together with quality assurance we are committed to providing an education that ensures that all new graduates can perform as a veterinarian capable of entering all commonly recognised branches of the veterinary profession.

Standard 1.2: The VEE must be part of a university or a higher education institution providing training recognised as being of an equivalent level and formally recognised as such in the respective country. The person responsible for the veterinary curriculum and the person(s) responsible for the professional, ethical, and academic affairs of the Veterinary Teaching Hospital (VTH) must hold a veterinary degree.

Details of the VEE:

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University of Cambridge
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Email: webmaster@vet.cam.ac.uk
Website: www.vet.cam.ac.uk

Dean and Head of Department: Prof Mark Holmes, MA, VetMB, PhD, FRCVS

The Department of Veterinary Medicine operates within the School of Biological Sciences (Head of School, Professor Jon Simons, www.bio.cam.ac.uk) as part of the University of Cambridge.

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Vice Chancellor: Professor Deborah Prentice.

Three main bodies are involved in the governance of the University: the Regent House (the legislative and principal electoral body of the University, made up of over 7,000 academics, researchers, and officers in the University and Colleges), the Council (our main executive and policy-making body with general responsibility for the administration of the University, the planning of its work, and the management of its resources), and the General Board of the Faculties (responsible for academic and educational policy, overseeing teaching and research in the University and the facilities required to support them). Further information on University governance is available at www.governance.cam.ac.uk

The Department of Veterinary Medicine is part of the School of Biological Sciences, a group of nine Departments and four major interdisciplinary research institutes all of which are involved in fundamental biological research with varying contributions to undergraduate and postgraduate teaching. The primary decision-making bodies relating to Veterinary Medicine are: the Veterinary Education Committee (chaired by the Dean and Head of Department of Veterinary Medicine and with representation from those responsible for strategic oversight of the design and delivery of preclinical and clinical teaching), the Faculty Boards of Biology (responsible for coordinating delivery of Years 1 and 2) and Veterinary Medicine (responsible for coordinating delivery of Years 4-6) and the Veterinary Medicine Strategy & Executive Committee (chaired by the Dean and Head of Department of Veterinary Medicine) responsible for departmental strategy, operational and financial oversight).

The University is a highly devolved organisation, and the main academic and budgetary units are the academic Departments. The University provides the legal, financial and organisational framework in which the Departments operate. The Department of Veterinary Medicine (established as the University of Cambridge Veterinary School in 1949) has the same recognition, status and autonomy as other University Departments. The Veterinary Medicine course is owned by the Veterinary Education Committee (chaired by the Dean and Head of Department of Veterinary Medicine) and delivered by members of the Department of Veterinary Medicine and specialist colleagues from other Departments within the School of Biological Sciences (see *Appendix 1.2 Department Overview*). The Department has a strong integrated professional services team and is supported by a wider team of professional services staff in University's central services (e.g. student services, human resources, finance). As part of a well-established collegiate university, the Department works closely with our colleges (27 of which admit students to student Veterinary Medicine) who deliver admissions (coordinated by a central university admissions service and in partnership with the Department), pastoral care, and contribute to the education of our students

The Department is led by the Dean and Head of Department, a veterinarian, who is fully responsible for the strategic direction, ethical and academic affairs, safety and operational and financial performance of the Department and for the veterinary curriculum. The Head of Department is supported by a senior leadership team including three Deputy Heads (Education & Clinical Dean, Research, and Strategy), a Hospital Managing Director (responsible for clinical services) and a Business & Operations Manager. The Head and Deputy Heads of Department are appointed by the University, while other roles are appointed by the Department, usually with input from the School and/or wider University.

Each member of the senior leadership team is responsible for the management of staff and services within their area and are supported by operational committees as required for the effective running of the Department. These Committees act to advise the senior leadership team and Strategy & Executive Committee, have decision-making power and budgetary control (with significant strategic decisions or those with major budgetary impact referred to the Strategy & Executive Committee) and are comprised of relevant staff at senior and more junior levels along with student and external representation where relevant (see *Appendix 3.4 Teaching Committees and ToR*). All departmental committees report to the Strategy & Executive Committee on strategic and operational matters, with educational matters from within the Department and via the Faculty Board of Biology considered by the Veterinary Education Committee.

The Department is a member of the UK Veterinary Schools Council (VSC), the representative body for nine UK veterinary schools offering degrees accredited by the Royal College of Veterinary Surgeons (RCVS). The Council also represents two non-UK associate members in Ireland and the Netherlands. Through its membership of various VSC sub-committees (www.vetschoolscouncil.ac.uk/policy), the Department engages in formal collaboration with other VEEs in areas of policy and sharing of best practice.

Standard 1.3: The VEE must have a strategic plan, which includes a SWOT analysis of its current activities, short- and medium-term objectives, and an operating plan with a timeframe and indicators for its implementation. The development and implementation of the VEE's strategy must include a role for students and other stakeholders, both internal and external, and the strategy must have a formal status and be publicly available.

Strategic Priorities

The Department of Veterinary Medicine aspires to change the practice of veterinary medicine and improve biological understanding of global One Health challenges. Our priorities are based on addressing major unmet One Health problems where we can contribute scientific insight and develop solutions.

We have three priority research areas which align with global One Health challenges:

- Infection and Immunity
- Disease Dynamics
- Systems Pathology

Within each of these areas, we focus on specific diseases where we have the expertise and critical mass to be internationally leading.

To address our priorities, we have a number cross-cutting sub-themes involving a number of our research groups in collaboration with departments across the University and with external partners:

- Education and training
- Epidemiology and Mathematical modelling
- Genomics and bioinformatics
- Comparative pathology
- Clinical Research
- Imaging (micro to macro scale)

SWOT analysis

Strengths	Weaknesses
Part of world renowned, research-led University of Cambridge (attract students and Staff) Collegiate system, pastoral care & support (financial) for students Strong Departmental research culture & success Intercalated degree embedded in course – 6 years Experienced, enthusiastic, committed & loyal staff (at all levels)	6-year course not attractive to some students Succession planning Contingency planning around critical equipment & facilities Financial: delivering against Hospital business plan Financial: lack of transparency Inconsistencies in local human resources (HR): inductions, staff reviews University of Cambridge, operational systems: finance, HR, Estates

On site clinical skills centre On site teaching hospital RSPCA clinic resource for teaching High staff: student ratios, true small group teaching High reputation & established success in Specialist veterinary training programmes	Lack of UoC understanding of financial needs of the school & lack of budgetary control Governance of curriculum – responsibility of Faculty of Biology (Years 1 and 2) and Faculty of Veterinary Medicine (Years 4-6)
Opportunities	**Threats**
Develop Primary care practice Teaching & Scholarship pathway providing route to promotion for clinical teaching staff; high likelihood of promotion given innovative and diverse teaching offered by the Department (undergraduate, internship, residency, MPhil/PhD) Develop research collaborations with world leading researchers in Biological Sciences and Medicine, along with broader University Departments Develop strategic partnerships with other local veterinary schools (Royal Veterinary College, Anglia Ruskin University) Development of taught MPhil programme – recruitment of additional students for research projects, new income stream Develop partnerships with local private and corporate practices (e.g. Leverage strength or local Newmarket equine practices for delivery of equine tracking rotations)	Reduced car parking on site / access for staff University of Cambridge, operational systems: finance, HR, Estates Future development of West Cambridge site and location of Vet School Increasing numbers of Vet Schools impacting student recruitment Reduction of resilience amongst students Competition for referral case load and specialist clinical staff from private referral Hospitals Increasing expectations of staff regarding flexible working makes delivering the course challenging Loss of key individuals / expertise due to retirement

Standard 1.4: The VEE must have a policy and associated written procedures for the assurance of the quality and standards of its programmes and awards. It must also commit itself explicitly to the development of a culture which recognises the importance of quality, and QA within the VEE. To achieve this, the VEE must develop and implement a strategy for the continuous enhancement of quality. The VEE must have a policy for academic integrity, i.e. the expectation that all staff and students act with honesty, trust, fairness, respect and responsibility.

The University of Cambridge is accountable for the quality and standards of its provision and is required to comply with Conditions of Registration set out by the Office for Students. The University's procedures for assuring quality in teaching, learning and assessment are designed to reflect:

- the University's mission
- the complexity, diversity and federal structure of the University
- the University's nature as a community of scholars
- the conviction that academic staff and students are most effective in an environment that is supportive and participative rather than directive and managerial
- the collegiate nature of the University

- a proportionate approach to potential risk to learning and teaching provision and to assessment

The University's Quality Assurance Framework ensures Faculties and Departments are empowered and clear on their responsibilities in taking the lead in academic matters including the design, implementation and day-to-day running of their courses. The Department of Veterinary Medicine has embedded its strategy for the continuous enhancement of quality within the overall University QA Framework. Specifically, the Department enacts robust Quality Assurance (QA) and Quality Improvement (QI) processes within its operations that are tailored to the Veterinary Medicine Course and are underpinned by continuous monitoring of outcome assessment. A culture which recognises the importance of quality and QA is developed and perpetuated in the Department. This is achieved by activities and written documentation that regularly remind staff and students about the importance of: a) engaging with the monitoring of teaching and assessment; b) the need to implement changes that are highlighted by analysis of metrics and feedback.

The Department's Education Quality Improvement Programme (EQIP) group, chaired by the Deputy Director of Teaching (QA) and supported by the QA Co-ordinator, proposes, implements and improves QA processes, and monitors the evolution of these initiatives ensuring feedback loops are closed. EQIP also monitors and updates the Department's QA Plan, used as the basis for continuous improvement in teaching and assessment to address specific QA and QI issues identified by measurable outcomes and stakeholder (both staff and students) engagement. EQIP reports directly to the Teaching Operations Committee (TOC) and Veterinary Education Committee (VEC).

Students are central to the Departments QA and QI activities, with elected student academic representatives, who are supported by Cambridge Student Union, for each year group. The representatives gather views and feedback from their peers for the twice termly Student Consultative Committee (SCC) meetings (6 times a year), chaired by the Deputy Head of Department (Teaching). Student representatives are also members and actively contribute to several other Departmental Committees including Veterinary Education Committee (VEC), Faculty Board, Safety Committee and the Clinical Curriculum Review Group (CCRG). In addition to student representative input, informal feedback from students is gathered through Focus Groups held termly with each year group by the Deputy Director Teaching (QA) and QA Co-ordinator, these are open to all students and are student-led forums.

Teaching in Years 1 and 2 is delivered as Courses, each with a Course Management Committee. The role of these committees includes collection and consideration of student feedback. Course Management Committees report to the Medical Sciences Tripos and Veterinary Sciences Tripos (MVST) Part I Management Committee. Its main responsibilities include quality assurance across the different courses, including collecting and acting on student feedback on the course as a whole; review of resources required for preclinical teaching; and liaison with, and monitoring of course management committees. The MVST Part I Committee report to the VEC and the Faculty Board of Biology (*see Appendix 3.4 Teaching Committees and TOR*).

As outlined in the QA Plan (*see Appendix 1.4 Quality Improvement Plan*), the Education Quality Improvement Programme (EQIP) group oversees the process to gather, analyse and respond positively to stakeholder feedback, this includes:

- Module Enhancement Questionnaires (MEQs) - student feedback is collected by the Department at the end of each unit of study in Years 4-6 (i.e. module, rotation and small group clinical practical) via MEQs, anonymised surveys accessed by students at the end of the

teaching via a QR code or weblink. MEQs provide qualitative and quantitative data on the delivery of learning and teaching with outcomes considered in Annual Review Reports.

- National Student Survey (NSS) - an annual UK survey of all final year undergraduates run by the Office for Student (OfS), results are considered on a detailed basis by both the Department, through EQIP, and the University.
- Annual Clinical Phase Coursey Survey - an anonymised survey run by the Department, structured as per the NSS, to gather feedback from Year 4 and 5 students on their experience of the year of programme as a whole.
- Cambridge Vet School Leavers Survey - an annual survey by the Department targeting graduates immediately following their graduation, asking them to provide feedback on different aspects of the course and provide data on the number of different procedures they completed.
- Cambridge Vet School Graduate Survey - an annual survey run by the Department targeting recent graduates 12-15 months after graduation, asking them to reflect on how well the course prepared them for their career.
- Veterinary School Clinical Supervisors (VSCS) Survey - an annual anonymous survey run by the Department for all students (Years 1 to 6), designed to assess the provision of VSCS support in the veterinary programme.
- RCVS Education Outcomes surveys - these surveys run by the RCVS of recent graduates and VetGDP (Graduate Development Programme) Advisers, who offer support to veterinary graduates, provides institutional specific data on the confidence and capabilities of new members entering the profession.
- Annual Teaching Staff Survey - an annual anonymous survey run by the Department for all staff involved in the delivery of learning, teaching or assessment to vet students. The purpose of the survey is to provide feedback and data from staff on the delivery of learning & teaching, curriculum and assessment matters that is used to consider ways to enhance support for staff, share best practice and identify areas that could be improved further for the benefit of students and staff.

University policies relating to student integrity and behaviours include: Plagiarism and Academic Misconduct and Rules of Behaviour for both current and former registered students are outlined in the University Statutes and Ordinances. Additional regulations for Fitness to Practise apply to all veterinary students at the University of Cambridge, with a Veterinary Students Register maintained by the Faculty Board. The University's Staff Guide, outlines the responsibilities and duties of staff, including a Misconduct in Research Policy and a Dignity at Work Policy.

Standard 1.5: The VEE must provide evidence that it interacts with its stakeholders and the wider society. Such public information must be clear, objective and readily accessible; the information must include up-to-date information about the study programme, views and employment destinations of past students as well as the profile of the current student population. The VEE's website must mention the VEE's ESEVT status, and its last Self-Evaluation Report and Visitation Reports must be easily available to the public.

Our current accreditation status is available on our website at https://www.vet.cam.ac.uk/study/vet. We inform relevant stakeholders and the public on our objectives and activities primarily through our website (www.vet.cam.ac.uk), and also through social media (Facebook, Instagram, X). We also communicate with our staff internally through bi-weekly Departmental newsletters, and termly Teaching Staff meetings (also recorded so staff that cannot attend can watch later).

Examples of employment destinations of our students are shown at https://www.vet.cam.ac.uk/study/vet/aftercambridge.

Standard 1.6: The VEE must monitor and periodically review its activities, both quantitative and qualitative, to ensure that they achieve the objectives set for them and respond to the needs of students and society. The VEE must make public how this analysis of information has been utilised in the further development of its activities and provide evidence as to the involvement of both students and staff in the provision, analysis and implementation of such data. Evidence must be provided that the QA loops are fully closed (Plan Do Check Adjust cycles) to efficiently enhance the quality of education. Any action planned or taken as a result of this data analysis must be communicated to all those concerned.

The Department's Aims and Strategic Priorities and the Teaching Operational Plan feed into the QA Plan, which is maintained, monitored and reviewed by EQIP. The aims and activities outlined in the QA Plan are revised on an ongoing basis as strategic objectives develop and when indicated by feedback outcomes (see Standard 1.4 for further information on the mechanisms in place to gather, analyse and respond positively to stakeholder feedback).

Four main areas have been identified as being key to the effective implementation of the QA Plan:
- Area 1 - Assessment and Provision of Feedback
- Area 2 - Module Organisation and Structure
- Area 3 - Module Management and Monitoring
- Area 4 - Communication

Within each area are several QA Aims, designed to assist in the continuous improvement of teaching and assessment. Each Aim lists those activities that are fully implemented as part of our QA structure and indicates areas of improvement and/or new activities that are planned and/or in the process of being completed/improved/finalised. Such actions are vigorously followed up by EQIP and eventually logged as completed (see *Appendix 1.4 Quality Assurance Plan*). At each EQIP meeting the group receives a live document, maintained by the QA Co-ordinator, outlining the changes made due to stakeholder feedback, this 'Evidence of Outcomes' document is also made available to students and staff through the VLE, Moodle. Timetabled in-person start of term briefings for students delivered by the Deputy Head of Department (Teaching), include a summary of some of the more recent changes that have been implemented following student input and feedback. Minutes from the Student Consultative Committee are made available to all students through the Department's intranet and student representatives are encouraged to feedback to their peers on the outcomes of the committee meetings they attend.

As outlined in the QA Plan, all modules and rotations are required to undergo an annual review and produce a report. The Annual Review Report summarises key metrics (including student feedback from the MEQs and other surveys plus assessment data) that are designed to evaluate the performance of the module or rotation and to assist the Organiser to develop an Improvement Plan for the following year. Points where aspects could be changed or improved are recorded as part of the Annual Review Report in the Implementation Plan; student feedback forms an important part of this process. Summary findings are presented to the EQIP group for discussion prior to reporting to Veterinary Education Committee meetings. Actions arising from the Improvement Plan are logged in the 'Evidence of Outcomes' document, available to students and staff.

Termly teaching staff meetings are held to inform staff of recent changes, with colleagues encouraged at these meetings to reflect on what went well in their teaching and to share best practice. The Department produces a Teaching Guide for Staff that provides an outline of the organisation of the teaching and assessment in the Department. The Teaching Guide is revised annually to ensure continuous improvement in response to feedback, stakeholder engagement, curriculum and/or assessment changes, provision of resources and availability of new learning technologies. The Teaching Guide is made available to students and staff.

Standard 1.7: The VEE must undergo external review through the ESEVT on a cyclical basis. Evidence must be provided of such external evaluation with the assurance that the progress made since the last ESEVT evaluation was linked to a continuous quality assurance process.

The last ESEVT visitation to the VEE was in 2015. Responses to each of the recommendations listed in the previous joint EAEVE & RCVS visitation report have been addressed in annual reports to the RCVS from subsequent years as detailed in *Appendix 1.7 EAEVE & RCVS 2015 Recommendations and Response*.

Comments on Area 1
While hugely appreciating the value of the University's democratic structures, the Department recognises that operating a rather flat leadership and committee structure at a more local level (within the Department) can impact the speed of progress and decision-making and it would benefit from reviewing this, balancing against the need to retain strong communication and feedback, and to empower staff.

Suggestions for improvement on Area 1
Departmental Leadership are seeking to streamline and clarify committee structures and lines of reporting and to emphasise succession planning as a key priority for 2025-26.

Area 2. Finances

Standard 2.1: Finances must be demonstrably adequate to sustain the requirements for the VEE to meet its mission and to achieve its objectives for education, research and services. The description must include both expenditures (separated into personnel costs, operating costs, maintenance costs and equipment) and revenues (separated into public funding, tuition fees, services, research grants and other sources).

Introduction

This section outlines the financial management framework within the University's Departments, focusing on the operations guided by the General Board of the University and the budgeting process utilized by the School of Biological Sciences (SBS). NB, all currency conversions are based on a rate of 0.83.

University-wide Budgeting and Business Planning

Business Planning is an established process across the University, through which Departments and Schools monitor progress towards strategic objectives and review the resources required to deliver them. The output of this process is shared with the central bodies and scrutinised during a series of planning meetings. Updated financial forecasts are consolidated enabling a University-wide view of income and expenditure, which informs the Annual Report to the University on the state of the University's finances (the Budget Report). As well as setting the budget for the coming year, the Budget Report also provides a view of the projected finances for the planning period, covering four years in total.

Operational Autonomy and Budget Allocation

Departments and Schools of the University are afforded substantial autonomy to manage their operations, adhering to directives from the SBS. Each School in the University is allocated an overall budget, which is then distributed to individual departments following budgetary negotiations. Funding from this source is referred to as "Chest" funding. Each department is assigned more than 250 source funding codes, allowing for the individualized assessment of costs attributed to various types of expenditure.

Budget Procedures for Research

Budgeting for research projects are individually costed. Unless otherwise stipulated by specific research grant funds, it is imperative that budgets do not carry over beyond the term of the grant. Research funding and expenditure forms a separate part of the departmental main accounting process and is also overseen by the University's research office.

Financial Oversight and Reporting

Monthly financial accounts are generated for the Schools, enabling the Dean and Senior Management Team to engage in regular discussions regarding financial performance with the SBS, BOM, and Departmental Finance Manager. This collaborative effort allows for advocacy regarding additional expenditure linked to increased income. Requests for capitalized equipment are processed in consultation with the SBS.

Management of Clinical Income

Clinical services are managed on a completely separate set of financial cost codes that are primarily run and monitored by the Department and are the responsibility of the Managing

Director of the Hospital under the authority of the Head of Department (Dean).

Budget Management and Flexibility
The budget for all operational areas, excluding research grants, is centrally administered and flexibly allocated by the SBS, subsequent to discussions with the Dean. This includes provisions for expenditure on replacement, maintenance, or new procurement of equipment and facilities. Local budget management empowers technical staff and the Research Manager to utilize resources effectively within the allocated budget constraints.

Monthly Reporting and Large Expenditure Considerations
The Departmental Finance Manager is designated to compile monthly financial reports for our operational committees (e.g. teaching, research, IT, facilities) according to budgets set by the Departmental Strategy & Executive Committee. Non-pay-related expenditures exceeding £10,000 (c. €12,000) that fall outside normal operational activities are subject to additional scrutiny by the Strategy & Executive Committee.

Funding for Development Projects
The Department is able to secure funding for small-scale building developments through the University Estates Department, contingent upon the required funding level. Additionally, the University has systems providing funding for new research or educational initiatives; the department also receives funding from Camvet, an independent charity set up to support the work of the hospital which recently provided £1.5M (€1.8M) funding for a new MRI facility.

Financial Year
The University's financial year runs from August 1 to July 31.

No funding is paid as a margin to e official authority overseeing the VEE on revenues from services and research grants. An overhead on non-research funded salaries of 30% is levied on salaries paid from sources other than Chest funding.

The annual tuition fee for national students is £9,250 (€11,145). The annual tuition fee for international students is £67,194 (€80,957).

Table 2.1.1. Annual expenditures during the last 3 academic years (AYs) (in Euros)

Area of expenditure	*2023/24*	*2022/23*	*2021/22*	*Mean*
Personnel	*€ 21,266,083*	*€ 20,426,206*	*€ 18,758,762*	*€ 20,150,351*
Operating costs	*€ 7,788,096*	*€ 7,232,940*	*€ 7,275,579*	*€ 7,432,205*
Maintenance costs	*€ 890,486*	*€ 834,956*	*€ 840,148*	*€ 855,197*
Equipment	*€ 525,965*	*€ 750,845*	*€ 299,103*	*€ 525,304*
Total expenditure	***€ 30,470,630***	***€ 29,244,946***	***€ 27,173,593***	***€ 28,963,056***

Table 2.1.2. Annual revenues during the last 3 academic years (in Euros)

Revenues source	*2023/24*	*2022/23*	*2021/22*	*Mean*
Public authorities	€ *n/a*	€ *n/a*	€ *n/a*	€ *n/a*
Tuition fee (standard students)	€ *n/a*	€ *n/a*	€ *n/a*	€ *n/a*
Tuition fee (full fee students)	€ *n/a*	€ *n/a*	€ *n/a*	€ *n/a*
*"Chest" Allocation***	€ *8,014,665*	€ *8,143,030*	€ *7,473,626*	€ *7,877,107*
Clinical services	€ *9,722,892*	€ *8,875,904*	€ *7,639,759*	€ *8,746,185*
Diagnostic services	€ *109,639*	€ *93,976*	€ *101,205*	€ *101,606*
Other services	€ *1,383,919*	€ *1,008,995*	€ *453,677*	€ *948,864*
Research grants	€ *7,835,834*	€ *8,610,966*	€ *9,376,591*	€ *8,607,797*
Continuing Education	€ -	€ -	€ -	€ -
Donations	€ *1,592,240*	€ *2,397,866*	€ *467,242*	€ *1,485,783*
*Other sources****	€ *44,684*	€ *513,674*	€ *656,158*	€ *404,838*
Total revenues	***€ 28,703,872***	***€ 29,644,411***	***€ 26,168,257***	***€ 28,172,180***

*** The University combine teaching-related revenues from public authorities and tuition fees within its "Chest" resource allocation model*

**** Largely grants and transfers of revenue within the University along with some revenue from endowment funds invested by the University.*

Table 2.1.3. Annual balance between expenditures and revenues (in Euros)

Academic year	*Total expenditures*	*Total revenues*	*Balance*****
2021/22	€ *27,173,593*	€ *26,168,257*	***-€ 1,005,336***
2022/23	€ *29,244,946*	€ *29,644,411*	***€ 399,464***
2023/24	€ *30,470,630*	€ *28,703,872*	***-€ 1,766,759***

***** Total revenues minus total expenditures*

Details of the University's overall financial position can be found in Appendices *2.1 UoC Financial Statements 2021-22*, *2.1 UoC Financial Statements 2022-23*, and *2.1 UoC Financial Statements 2023-24*.

Standard 2.2: Clinical and field services must function as instructional resources. The instructional integrity of these resources must take priority over the financial self-sufficiency of clinical services operations.
The VEE must have sufficient autonomy in order to use the resources to implement its strategic plan and to meet the ESEVT Standards.

Description of the modus operandi for the financial management of the clinical and field services

The clinical services (encompassing our Teaching hospitals, our ambulatory services and diagnostic laboratories) are fully integrated within the governance of the Department, with the Head of Department (Dean) chairing the Veterinary Clinical Services Board (VCSB). The purpose of the clinical services is articulated explicitly as supporting the academic mission of the Department, and financial strategy is to optimise cost recovery as a corollary rather than primary objective. Achieving financial sustainability is recognised as challenging under this model and is a matter of concern to the General Board at present. The Department is taking actions to improve

financial performance; for example, during 2024 a strategic review of our Equine teaching was undertaken and the decision taken to close our Equine referral services. However, this review prioritised assuring educational quality and the decision recognised the benefits of focussing our in-house services on primary care whilst strengthening our relationships with worldclass equine referral centres based locally in Newmarket.

Degree of autonomy of the VEE on the financial process
The central University provides a recurrent funding to support the resourcing of clinical services (~£1.7m or ~€2.05M per annum); this funding is allocated to specific posts across the clinical teams, meeting full costs of employment for these roles irrespective of any variability in student numbers. However, the majority of operating budget for the clinical services is derived from the trading income. The Department has full autonomy over this funding, subject to adherence to University Financial Regulations and HR policies.

Standard 2.3: Resources allocation must be regularly reviewed to ensure that available resources meet the requirements.

In addition to the directly managed facilities budget, the Department is supported by the University's central Estates Division which directly resources a programme of planned and reactive maintenance and development works across the estate. This work is funded by a centrally managed budget, funded by "Chest" resources allocated from the central University. While funds are finite, planned and essential (e.g. to meet safety requirements) projects will be funded. Ongoing capital works in the Department include Boiler refurbishments in four of our buildings (with a total budget of c. €1.14M), refurbishment of our Histology lab, complete refurbishment of our Large Animal Unit, and the creation of facilities for feline iodine 131 work in place of a disused kennel facility.

For developmental work and purchase of equipment, the Department has access to a number of funding sources, including:
Internal

- an investment fund managed by the School of Biological Sciences; a strategic fund established to specifically support priority activities and initiatives that align with the School's Academic Vision. The Head of Department is a member of the Council of the School and is involved in both the development of the academic vision, and decision-making for the investment fund. Recent contributions from this fund have supported equipment repairs, refurbishment of our pathology teaching lab, enhancements to the histology ventilation system and our large animal facilities.
- a university-wide Minor Works fund available to support projects between €60K-€2.4M. Funds are usually provided on a matched funding basis with the Department and/or School providing the remainder.

External

- investment from Camvet (www.camvet.vet.cam.ac.uk), a small charity established to raising funds for the Queen's Veterinary School Hospital here in Cambridge. The charity provides a regular round of smaller-scale equipment funding (<c.€30K) to help teach the veterinary students and supports the training bursaries for several Clinical Training Scholars. Camvet also supports larger-scale projects including the provision of €1.9M to enable the purchase of a new MRI machine to support our diagnostic imaging work.
- major research projects often include significant sums to support highly specialist equipment and/or adaptions to lab space.

Table 2.3.1. Prospected expenditures for the next 3 academic years (AYs) (in Euros)

Area of expenditure	*2024/25*	*2025/26*	*2026/27*
Personnel	*€ 20,118,767*	*€ 20,190,642*	*€ 20,277,855*
Operating costs	*€ 6,777,352*	*€ 6,951,579*	*€ 7,259,730*
Maintenance costs	*€ 859,368*	*€ 921,456*	*€ 988,765*
Equipment	*€ 2,010,002*	*€ 644,842*	*€ 783,739*
Total expenditure	***€ 29,765,489***	***€ 28,708,518***	***€ 29,310,089***

Table 2.3.2. Prospected revenues for the next 3 academic years (in Euros)

Revenues source	*2024/25*	*2025/26*	*2026/27*
Public authorities	*€ n/a*	*€ n/a*	*€ n/a*
Tuition fee (standard students)	*€ n/a*	*€ n/a*	*€ n/a*
Tuition fee (full fee students)	*€ n/a*	*€ n/a*	*€ n/a*
*"Chest" Allocation**	*€ 7,395,534*	*€ 7,504,497*	*€ 7,624,355*
Clinical services	*€ 8,874,000*	*€ 10,090,000*	*€ 11,322,000*
Diagnostic services	*€ 75,000*	*€ 74,000*	*€ 76,000*
Other services	*€ 1,432,357*	*€ 1,482,489*	*€ 1,534,376*
Research grants	*€ 8,110,088*	*€ 8,393,941*	*€ 8,687,729*
Continuing Education	*€ -*	*€ -*	*€ -*
Donations	*€ 2,747,420*	*€ 1,396,440*	*€ 1,550,615*
Other sources	*€ 46,248*	*€ 47,867*	*€ 49,542*
Total revenues	***€ 28,680,646***	***€ 28,989,234***	***€ 30,844,617***

** The University combine teaching-related revenues from public authorities and tuition fees within its "Chest" resource allocation model*

Table 2.3.3. Prospected annual balance between expenditures and revenues (in Euros)

Academic year	*Total expenditures*	*Total revenues*	*Balance*
2024/25	*€ 29,765,489*	*€ 28,680,646*	***-€ 1,084,843***
2025/26	*€ 28,708,518*	*€ 28,989,234*	***€ 280,715***
2026/27	*€ 29,310,089*	*€ 30,844,617*	***€ 1,534,528***

Institutional processes for business planning are outlined in 2.1 above where we note the significant autonomy afforded to Departments around the allocation of resources. At an institutional level, the University publishes its annual reports and financial statements and ensures this information is publicly available.

Expenditure

As is evident in Table 2.1.1 above, the significant majority of our expenditure is allocated to staffing costs and workforce planning is the primary driver for this area of expenditure. Our research and teaching workforce and professional services staff supporting the operational delivery of research and teaching) are supported through "Chest" allocations negotiated through the annual planning round (see 2.1 above) and based on the academic and operational needs of the Department. All proposed recruitment (both new needs and replacement posts) is subject to review at School level (with full representation from the Department) to ensure posts always offer best value for money to

the Department, the School and the University. This review is based on a short strategic business case. Clinical posts are subject to internal departmental review by the clinical leadership team, and all recruitment is also assessed to ensure best value for money while ensuring the clinical needs of the Department can be met.

From 2024-25, the Department began a new process of operational budgeting, inviting operational committees and officers (e.g. Teaching Operations Committee with the Deputy Head of Department, Teaching) to consider expected needs for the academic year ahead and present a budget plan for consideration. All budget plans are considered by the Departmental Strategy & Executive Committee (with support as required from its Finance Sub-Group) and approved with any adjustments which may be required. Operational Committees are given oversight of these budgets, and it is intended that these groups receive regular expenditure reports to help monitor expenditure against budget. Exceptional or new needs identified by operational committees is presented to the Strategy & Executive Committee via a business case and this body makes decisions on if and how these needs can be supported now and in the future.

Revenues & Investments

- Processes for the allocation of tuition fee and public authority income (allocated to Departments via the "Chest") are outlined in 2.1 above.
- Research Grant income is generated from funders based on a detailed full economic costing. All Departments of the University use the Worktribe system to model costs and create accurate costing models. The Department is supported by colleagues in the University's Research Operations team with this work: https://www.research-operations.admin.cam.ac.uk/preparing-funding-application
- The Department has a number of endowments which generate small amounts of funding each year, primarily used to support student activity. These endowments are invested in the Cambridge University Endowment Fund, a well-established investment fund generating strong return on investment and managed by Cambridge Investment Management: www.ucim.co.uk
- The majority of the Department's income is generated by hospital trading activity which is managed by the Hospital Managing Director with the support of the clinical leadership team.

Comments on Area 2

While our hospital team has developed robust financial reporting and modelling for commercial activity, University systems supporting financial planning for academic departments has been historically limited and our central financial systems, now approaching end of life, offer limited support for the production of management accounting making this a lengthy and complex process. We look forward to the implementation of a new financial systems and set of structures within the University over the next two years which should transform our ability to report and plan with ease both at an institutional and a departmental level.

Suggestions for improvement in Area 2

The Department should engage fully with the University's programme of finance transformation, in particular the work to enhance financial transparency, reducing the time and effort required to produce management reporting, making financial information easier to access and understand for a wider range of staff, and enhancing our ability to benchmark with other cognate organisations.

Area 3. Curriculum

Standard 3.1: The curriculum must be designed, resourced and managed to ensure all graduates have achieved the graduate attributes expected to be fully compliant with the EU Directive 2005/36/EC (as amended by directive 2013/55/EU) and its Annex V.4.1. The curriculum must include the subjects (input) and must allow the acquisition of the Day One Competences (output) listed in the ESEVT SOP Annex 2.

Curriculum Structure
We have a single study programme to become a veterinarian, designed to meet the Day One Competences of EAEVE and RCVS and is fully compliant with the EU directive 2005/36/C (as amended by directive 2013/55/EU) and its Annex V4.1.

The veterinary programme at Cambridge is 6 years; Years 1 and 2 deliver training in the anatomy and physiology of companion animal species, introductory concepts of pathology and pharmacology, and principles of animal management, veterinary public health, professionalism, communication skills, reflection and veterinary ethics. Teaching in Years 1 and 2 is delivered through lectures, problem-based learning sessions, laboratory-based practicals and small group tutorials (called “supervisions”). In addition, students undertake small group practical training and assessment in animal handling prior to completion of animal husbandry extramural studies, AHEMS (10 weeks in Year 1, 12 weeks in each of Years 2 and 3), as per the requirements of the RCVS.

In Year 3, students complete a year of study outside of the veterinary medicine programme. This can be in a range of subjects including sciences such as pathology or other subjects such as management studies. The students also complete either a laboratory based (or computational) research project or can write a library-based dissertation on a specific topic. Successful completion of all three years (including passing all three years) will lead to the award of the Batchelor of Arts (BA) degree. Affiliate students who already possess an undergraduate honours degree may transition straight from Year 2 to Year 4 (without competing Year 3) if they wish.

Years 4 and 5 consist of an initial “transition” term, four terms of species-based and Veterinary Public Health courses corresponding to subject examinations at the end of final year. Following a holistic curriculum review in 2021, the course was reorganised, and teaching is now delivered in species-specific courses that include relevant content from the previous cross-species organ system-based and discipline-based modules. Teaching is now mostly delivered as half day “themed” sessions that are a combination of lecture and directed learning teaching. This has enabled consolidation of the teaching of aetiology, pathogenesis, pathology, diagnosis, treatment, management and prevention of specific conditions and clinical presentations that are relevant to a general practice setting (e.g. vomiting).

In addition, the students spend 2 mornings a week in Years 4 and 5 in small group sessions (7-8 students per group) referred to as Small Group Clinical Practicals (SGCPs) which allow students to build practical and professional skills. Students are assigned to different SGCPs on a rota basis. The content of the SGCPs was revised in academic year 2023-24 to include additional sessions on clinical examination of dogs/cats and pharmacy and prescribing skills. The final term of Year 5 is a ‘transition’ term with sessions focused on clinical reasoning, advanced communication skills, evidence-based medicine and other professional activities such as practice management. A new

session on holistic approach to euthanasia (encompassing communication skills and practical aspects) was introduced in the 2023-2024 academic year. At the end of Year 5, practical skills taught throughout Years 4 and 5 are assessed by Objective Structured Clinical Examinations (OSCEs), which all students must pass prior to proceeding to Year 6 of the curriculum.

Year 6 of the Programme comprises a lecture free final year spanning 40 weeks from June to the following April during which each student spends 26 weeks on clinical rotations within the Veterinary Hospitals/Clinics in addition to time completing research projects and undertaking EMS. During Final year rotations students are divided into groups of 3–4 students who work closely with clinical teams (Clinicians, Service Nurses, Junior & Senior Training Scholars) running that particular service. On most 'client facing' services students are allocated cases referred to the Hospital, they meet & greet the client and take a clinical history before performing a clinical examination of the animal. They are then expected to identify a problem list, establish the main differential diagnoses and suggest a plan for further investigations to reach a diagnosis. The students are supervised, assisted and assessed by clinical staff throughout this process, who retain responsibility for management of the case. Interspersed with management of clinical cases, are ward rounds, case discussions, seminars or quizzes, and cadaver surgeries, for example. The students are involved in the patient discharge process, writing discharge instructions for owners and reports for referring veterinary surgeons. Students record cases that they have been involved in as part of their 'Learning Opportunities Log'. At the end of each clinical rotation, students are assessed and provided with written feedback using the Clinical Rotation Assessment and Feedback (CRAF) form. At the end of Year 6, students can choose an area of interest (e.g. anaesthesia) in which to undertake an additional 4 weeks of clinical training (the 'elective' period).

Regarding teaching in slaughterhouses and premises for the production, processing and sale of food of animal origin, teaching of this subject in Year 4 was amended in 2020 due to Covid restrictions, therefore the compulsory abattoir visit (1 day) was replaced with self-directed half day 'virtual' session watching slaughterhouse operations video clips & class followed by guided discussions. In the summer the Year 4 students (groups of 5-6 students) spend 1 week each in compulsory training in an approved mixed species red meat slaughterhouse at the University of Bristol, UK. In Year 5, further interactive teaching takes place (in groups of 30 students). In Year 6 students receive a unique 'farm-to-fork' experience (in groups of 6-8 students with teacher) by visiting a family-owned farm, red meat abattoir, and a cutting plant with a retail unit which also makes the meat preparations and meat products. Their observations/ opinions are then shared in "From theory to practice" discussions: which includes all aspects of official controls tasks (inspection & auditing, including sustainability)

Curriculum Management

Curriculum oversight is the responsibility of the Veterinary Education Committee (VEC). VEC is tasked to keep under review the provision of veterinary education in the University, with a view to ensuring that the Years 1-2 and Years 4-6 of the course leading to the VetMB Degree form a coherent whole, that the balance of elements in the curriculum is appropriate, and that standards in different subjects are consistent. VEC advise the Faculty Boards of Biology and Veterinary Medicine on matters relating to the education of veterinary students, including admissions policies, student statistics, and examination results; matters relating to resources needed for the provision of veterinary education; and proposals for changes in the veterinary curriculum and in the relevant examinations. Years 1 and 2 are managed by the Faculty Board of Biology, in conjunction with the Part 1 Medical and Veterinary Sciences Tripos (MVST) committee which is chaired by the Director of Education for MVST Part 1. Years 4-6 of the course are managed by the Teaching

Operations Committee (TOC) of the Department of Veterinary Medicine, chaired by the Deputy Head of Department (Education). We also have a Clinical Curriculum Review Group (CCRG), who consider; the content and delivery of Years 4-6 of the course; the balance of different subject areas and disciplines; and ensure the Clinical Curriculum complies with all the necessary requirements of the EAEVE and RCVS Day One Competences and make recommendations to TOC. The CCRG is also tasked with identifying curriculum overlap and omissions and making suggestions for how these can be avoided to the TOC and VEC.

Table 3.1.1. Curriculum hours in each academic year taken by each student

	A	B	C	D	E	F	G	H	J
Year 1	185	10	840*	128	18	4.5	240		1425.5
Year 2	185	6	840*	111	3	1.5	240		1386.5
Year 3	Not applicable as not part of Veterinary Medicine curriculum								
Year 4	346	18	1002#	46	36	62	350		1860
Year 5	264	31	993#	44	4	68	350		1754
Year 6		56	2		7	940	500	160	1665

*A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: EPT; H: others (specify -e.g. graduation thesis); J: total . * Includes 35 hours per week of self-study/supervisions (3 x 8-week terms). # Includes 35 hours per week of self study/examination preparation (28 weeks per year). H = VetMB Research Project*

Table 3.1.2. Curriculum hours taken by each student

	A	B	C	D	E	F	G	H	J
Basic Sciences									
Medical physics	5								5
Chemistry (inorganic and organic sections)	1								1
Animal biology, zoology and cell biology	22			8					30
Feed plants and toxic plants	1			2					3
Biomedical statistics	11	4							15
Anatomy, histology and embryology	64			130					194
Physiology	94			28					122
Biochemistry	24	4		4					32
General and molecular genetics	20	2							22
Pharmacology, pharmacy and pharmacotherapy	46	6		12					64
Pathology	67			18					85
Toxicology	2	2							4
Parasitology	19	1		6					26
Microbiology	16			16					32
Immunology	13			16					29
Epidemiology	10								10
Information literacy and data management				2					2
Professional ethics and communication	11	16		2					29
Animal health economics and practice management	20	6							26
Animal ethology	8								8
Animal welfare	19								19
Animal nutrition	16								16
Obstetrics, reproduction and reproductive disorders	14								14
Clinical Sciences in companion animals (including equine and exotic pets)									

	A	B	C	D	E	F	G	H	J
Diagnostic pathology	27	21		12		20			80
Medicine	105	10		16		170			301
Surgery	50			3		180			233
Anaesthesiology and analgesia	15			12		80			107
Clinical practical training in common companion animals	8	4		30	17	102			161
Infectious diseases	7								7
Preventive medicine	5					40			45
Diagnostic imaging	15			4		80			99
Therapy in common companion animals	61					290			351
Obstetrics, reproduction and reproductive disorders	20	6							26
Clinical Sciences in food-producing animals (including Animal Production and Herd Health Management)									
Obstetrics, reproduction and reproductive disorders	18	5.5				20			43.5
Diagnostic pathology	2					10			12
Medicine	39	7							46
Surgery	2					20			22
Anaesthesiology and analgesia	2								2
Clinical practical training in common food-producing animals	3			0	17	24			44
Infectious diseases	25			2					27
Preventive medicine	5					20			25
Diagnostic imaging									0
Therapy in common food-producing animals	11	3				20			34
Animal Production, including breeding, husbandry and economics	7								7
Herd health management	9	23.5							32.5
Veterinary Public Health (including Food Safety and Quality)									

	A	B	C	D	E	F	G	H	J
Veterinary legislation including official controls and regulatory veterinary services, forensic veterinary medicine and certification	14		17						31
Control of food, feed and animal by-products	2			0	7				9
Zoonoses and their prevention	10			0	7				17
Food hygiene and environmental health	12		17	3	20				52
Basic food technology	3		3						6

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: EPT; J: total

Table 3.1.3. Practical rotations under teaching staff supervision (excluding EPT)

Types	List of Practical Rotations (Disciplines/Species)	Weeks *	Year of programme
Intra-mural clinics (VTH)	Small Animal First Opinion Practice Small Animal Internal Medicine Small Animal Neurology Small Animal Oncology Small Animal Out of Hours and Critical Care Small Animal Cardiology Small Animal Soft Tissue Surgery Small Animal Orthopaedics Anaesthesia Diagnostic Imaging Clinical Pathology and Anatomic Pathology	2 2 1 1 2 1 2 2 2 2 1	Year 6 for all
Ambulatory clinics	Equine Practice Farm Animal Ambulatory Practice and Hospital	4 2	Year 6 for all
Herd Health Management			
VPH (including FSQ)		0.8	0.6 weeks in Year 4 for all 0.2 weeks in Year 6 for all
Electives	Students choose one of the following: Small Animal First Opinion Practice Small Animal Medicine (including Diagnostic Imaging, Oncology, Dermatology and Clinical Pathology) Small Animal Cardiology Small Animal Neurology Anaesthesia Anatomic Pathology Equine Studies Farm Animal Studies Other Species (‘Exotics’)	4	Year 6 for all
Other (specify)			

* Each week would be approximately 40 hours (1,120 hours in total)

Table 3.1.4. Curriculum hours taken as electives for each student

Students undertake 160 hours of elective training in Year 6 (see Table 3.1.3).

Table 3.1.5. Optional courses proposed to students (not compulsory)

There are no optional courses within the Cambridge veterinary medicine programme.

Standard 3.2: Each study programme provided by the VEE must be competency-based and designed so that it meets the objectives set for it, including the intended learning outcomes. The qualification resulting from a programme must be clearly specified and communicated and must refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.
The VEE must provide proof of a QA system that promotes and monitors the presence of a teaching environment highly conducive to learning including self-learning. Details of the type, provision and updating of appropriate learning opportunities for the students must be clearly described, as well as the involvement of students. The VEE must also describe how it encourages and prepares students for lifelong learning.

The Final VetMB degree awarded at the end of the six-year Veterinary Medicine programme at the University of Cambridge is clearly specified and communicated as to both frameworks for FHEQ 'level 7' and QF-EHEA 'second cycle (end of cycle)' in line with the Quality Assurance Agency Framework. The programme's curriculum aims to produce highly motivated and adaptable veterinary graduates, with a desire for continuing education, who are well equipped to embark on a successful career in veterinary practice, bio-medical industry or public service, or in suitable cases to study for higher degrees, or further / specialist qualifications, and to become the academic teachers and researchers of the future. The curriculum is competency-based and uses Day One Competences (D1Cs) of the RCVS and EAEVE to inform Intended Learning Outcomes (ILOs) at the programme level, the unit of study level and at the individual teaching activity level. The Clinical Curriculum Review Group (CCRG), which includes student and external stakeholder membership, ensures the curriculum complies with all competences required by accrediting bodies, including EAEVE.

The Department seeks to promote a positive learning environment (physical and digital) for the benefit of all students and staff. The timetable is designed to offer students opportunities for group study and self-learning outside of timetabled activity. Clinical veterinary students have 24/7 access to the Clinical Skills Centre where they can use various learning resources including interactive models and simulators for training and self-study. Quiet study space within the main Departmental building and the nearby West Hub provide dedicated support for veterinary students to search for information, to study effectively, to plan and conduct research studies as well as providing flexible space for independent and small group study. Furthermore, college and University libraries are available to all students.

The Annual Clinical Phase Course Survey and the National Student Survey (see Standard 1.4) seeks feedback from clinical veterinary students on their learning opportunities and the availability of learning resources with specific questions covering these areas. The survey data is analysed by EQIP who will identify any areas that may require improvement and makes requests for the Teaching Operations Committee (TOC) to act upon these accordingly. Actions taken in response to feedback are reported back through the Evidence of Outcomes document to ensure loops are closed. Student feedback on the provision of accessible and inclusive online learning materials (as outlined in the Teaching Guide) is additionally sought through the MEQ surveys, with issues highlighted and dealt with through the Annual Review Reports (see Standard 1.6).

The Department has a Teaching Venue Inspection Visit (TVIV) Group. This ensures that all physical teaching environments (at the Vet School, the University and off-site) used by the programme are quality assured, and appropriate standards of teaching, support and learning outcomes are achieved. The TVIV group coordinates a rolling biennial programme of scheduled

inspection visits to all teaching venues used by veterinary students. This group raises any concerns with TOC or makes suggestions to TOC about improvements that could be made to enhance student learning. Visits may be informed by student and staff feedback on teaching environments, in addition to the rolling programme of scheduled visits.

The Veterinary Medicine programme aims to give students the tools that will encourage and prepare them for lifelong learning. The Transferable Skills that are covered include:

- the capacity to communicate effectively with clients and with colleagues both in the veterinary profession and in other disciplines;
- the ability to work well as members of a team;
- the capacity to undertake an extended study of a topic and to communicate the results verbally and in writing;
- the capacity for self-audit and awareness of personal limitations;
- the ability to recognise when to seek advice;
- an ability to recognise mental ill health in oneself or others and seek appropriate advice;
- the capacity to cope with uncertainty and adapt to changes;
- the commitment to continuing professional development throughout their career.

Students are also required to submit an e-Portfolio of work that includes assignments delivered across the 6 years of the Veterinary Medicine programme; these include: animal handling assessments, reflections on their pre-clinical and clinical EMS experiences, an equine certification exercise, their DOPS (Directly Observed Procedural Skills), the results from their Equality and Diversity training, evidence of GDPR training, the outcome of a prescribing assessment test, a learning opportunities log, and evidence of diligent attendance at practical classes. The e-Portfolio is examined and assessed as part of the requirements for being awarded the VetMB degree. The MyProgress electronic Practice Assessment Document (ePAD) platform used by the Department of Veterinary Medicine for its e-Portfolio, enables students to gather feedback while on EMS placement in real-time, be proactive in driving their professional development, and gain full support from clinicians in practice alongside academic staff on campus.

Standard 3.3: Programme learning outcomes must:

- **ensure the effective alignment of all content, teaching, learning and assessment activities of the degree programme to form a cohesive framework**
- **include a description of Day One Competences**
- **form the basis for explicit statements of the objectives and learning outcomes of individual units of study**
- **be communicated to staff and students**
- **be regularly reviewed, managed and updated to ensure they remain relevant, adequate and are effectively achieved.**

Programme learning outcomes (PLOs) are included in our Programme Specification documentation publicly available online at https://www.camdata.admin.cam.ac.uk/programme-specification-archive. Programme level outcomes are included in the documentation for the Veterinary Sciences Tripos (VST; Years 1 and 2) and the Batchelor of Veterinary Medicine (Years 4-6) and are described in *Appendix 3.3 Curriculum Mapped to D1Cs*.
Within Years 1-2, holistic intended learning outcomes (ILOs) have been derived that are mapped to the EAEVE and RCVS Day One Competences (D1Cs) *see Appendices 3.3 Curriculum Mapped to D1Cs* and *3.3 EAEVE and RCVS D1Cs Mapping*. Course level ILOs are stated, and unit level ILOs are in the process of being constructed, with the aim to complete this process by the end of

the MVMCR review period. Within Years 4-6, ILOs are stated for all lectures, large group practicals, small group clinical practicals and clinical rotations, and these are all contained within a single document that is accessible to all students and staff through our virtual learning environment (Moodle). All ILOs are mapped to the EAEVE and RCVS Day One Competences on the same spreadsheet. ILOs are communicated to all students at the start of each teaching session.

ILOs are reviewed by lecturers and module organisers on an annual basis (after the end of each academic year), with any proposed amendments for the next academic year communicated to the Deputy Director of Teaching (Curriculum) who will refer any significant proposed changes to the Teaching Operations Committee. TOC may invite the Clinical Curriculum Review Group to review any changes and make recommendations to TOC regarding implementation. Once changes are approved by TOC, these are communicated to the module organiser/lecturer and updated each year within the central curriculum document, which is then finalised and communicated to students prior to the start of each academic year. ILOs will also be reviewed as part of the holistic review process that will be undertaken by the Clinical Curriculum Review Group in academic year 2024-25.

Standard 3.4: The VEE 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 QA of the curriculum, particularly gathering, evaluating, making change and responding to feedback from stakeholders, peer reviewers and external assessors, and data from examination/assessment outcomes**
- **perform ongoing reviews and periodic in-depth reviews of the curriculum at least every seven years by involving staff, students and stakeholders; these reviews must lead to continuous improvement of the curriculum. Any action taken or planned as a result of such a review must be communicated to all those concerned**
- **identify and meet training needs for all types of staff, maintaining and enhancing their competence for the ongoing curriculum development.**

As outlined in 3.1, The Veterinary Education Committee (VEC) is responsible for the oversight of the provision of veterinary education in the University, with a view to ensuring that the preclinical and clinical parts of the course leading to the VetMB Degree form a coherent whole, that the balance of elements in the curriculum is appropriate, and that standards in different subjects are consistent. The VEC has representatives from the Faculties of Biology and Veterinary Medicine and receives reports from and advises both Faculty Boards.

The Faculty Board of Biology is responsible for the undergraduate teaching of biological sciences in the Natural Sciences Tripos through the Biological Sciences Committee, and for the Medical and Veterinary Sciences Tripos (Years 1–2) through the MVST Part I Committee. The Faculty Board of Veterinary Medicine is responsible for veterinary clinical teaching across the Years 4-6 of the course and delivers this via the Department's Teaching Operations Committee (TOC) which oversees and manages the clinical curriculum (Years 4-6) and its delivery, including identifying and meeting the training needs for all staff engaged in delivery of teaching. The Education Quality Improvement Programme (EQIP) group oversees the QA of the curriculum particularly gathering, evaluating and responding to feedback and data from assessment outcomes. The Clinical Curriculum Review Group (CCRG) performs ongoing reviews of the clinical curriculum leading to its continuous improvement. Students are represented at both Faculty Boards, the MVST Part 1

Committee, VEC and CCRG. There is a separate Student Consultative Committee (SCC) at which students can raise matters concerning teaching delivery and course content, amongst other issues.

See *Appendix 3.4 Teaching Committees and ToR* for organogram of relevant committees, their Terms of Reference and lines of reporting.

Standard 3.5: Elective Practical Training (EPT) includes compulsory training activities that each student must achieve before graduation to complement and strengthen their core theoretical and practical academic education, inter alia by enhancing their experience, professional knowledge and soft skills. Like all elective activities, its contents may vary from one undergraduate student to another.

In the UK, the majority of Elective Practical Training (EPT) is known as Extra-Mural Studies (EMS) which is required by the RCVS. EMS is performed outside of the normal academic environment, i.e. always takes place external to the VEE. Students graduating before 2029 must complete 12 weeks of animal husbandry placements, known as AHEMS, which must be completed in the pre-clinical years of the course (i.e. before entry Year 4 of study). They must then undertake 26 weeks of clinical placements (CEMS) from Years 4-6, to be completed before entry into the Final VetMB Part II examinations, which take place in the May of Year 6. Students graduating in 2030 and beyond will need to meet the new, updated requirements of the RCVS' EMS policy, which requires 10 weeks of AHEMS and 20 weeks of CEMS.

EPT placements complement the teaching on the compulsory aspects of the VetMB course. For common domestic species, students must pass animal handling assessments before being permitted to undertake AHEMS. For students graduating before 2030, a minimum of 2 weeks AHEMS in each of horses, cats/dogs, sheep, cattle, and pigs must be undertaken, and the final 2 weeks can be in any species, including non-domestic species. A minimum of 2 weeks of CEMS in each of equine, farm, and small animal practice is also undertaken. These are known as 'species minima'. The species minima weeks are designed to consolidate the teaching and practical classes at the VEE by enabling students to be directly involved in specific types of clinical and animal handling placements outside of a traditional academic environment, broadening their experiences. For students graduating in 2030 and beyond, there are no species minima requirements, but students will be encouraged to seek a broad range of EPT placements to maximise their educational experiences.

Standard 3.6: The EPT providers must meet the relevant national Veterinary Practice Standards, have an agreement with the VEE and the student (stating their respective rights and duties, including insurance matters), provide a standardised evaluation of the performance of the student during their EPT and be allowed to provide feedback to the VEE on the EPT programme. There must be a member of the teaching staff responsible for the overall supervision of the EPT, including liaison with EPT providers.

A database of approved EPTs is held at the Department. All placement providers must be on this approved list for students to attend. To become an approved EMS placement, the placement is sent an agreement document which covers aspects of insurance, risk assessments and health and safety. Once the Tutorial Office receive this signed agreement document, they add it to the internal placement database. Placement agreements are renewed every 3 years for both AHEMS and CEMS.

Overseas placements are sent information regarding EMS at Cambridge, a covering letter and a questionnaire covering risk assessments and health and safety matters. Once they return this questionnaire, if there are no questions over the suitability of the placement, they are added to a list of approved overseas placements kept on the VLE.

Student feedback forms are completed for each AHEMS and CEMS by the provider, which gives feedback on the student's progress throughout the placement. Students also feedback on their experiences of the placement, including any comments they wish to add to the database to help other students with placement selection, and a flag to remind the student how to report any incidences of discrimination or other issues whilst on placement. These forms are visible to the EMS Co-Ordinators and the student's VSCS (Veterinary Schools Clinical Supervisor). The VSCS oversees the student's professional progress, primarily focused on EMS placements, guiding the students to ensure that placements are appropriate and suitable for their stage of education and discussing each placement before and after to ensure progress is as expected. Any problems with placements are flagged by either the student themselves, the tutorial office, or the VSCS to the EMS Co-Ordinators. Any significant problems reported by students will lead to a placement being removed as a permitted placement, and a list is maintained to prevent re-entry of a placement onto the database at a later date.

The academic members of staff responsible for overall supervision of EPT are known as EMS Co-Ordinators, two staff members who are qualified veterinarians. In addition, there is an EMS administrator, has overall responsibility for ensuring that the database is maintained and co-ordinating student records. The E-Portfolio Academic Lead has overall responsibility for co-ordination of the student E-Portfolios, although individual student management rests with the VSCS for each student.

Standard 3.7: Students must take responsibility for their own learning during EPT. This includes preparing properly before each placement, keeping a proper record of their experience during EPT by using a logbook provided by the VEE and evaluating the EPT. Students must be allowed to complain officially and/or anonymously about issues occurring during EPT. The VEE must have a system of QA to monitor the implementation, progress and then feedback within the EPT activities.

The expectations for students throughout their AHEMS and CEMS placements are explained in detail as training delivered in Year 1 prior to AHEMS, in Year 2 as an introduction to CEMS to introduce clinical placements, and in Year 4 prior to CEMS. Students must attend these training sessions prior to starting the AHEMS and CEMS placements, respectively. These expectations are also re-iterated through individual termly meetings between the students and their VSCS. Students must complete relevant health and safety training and pass their animal handling assessment in the common domestic species prior to attending AHEMS. Students must complete relevant health and safety training and taken the online 'EMS Passport' training prior to attending CEMS.

Students graduating before 2030 set their own aims and objectives for each CEMS placement before attending, with the guidance of their VSCS, and they also reflect on them after attending the placement. Suggested aims and objectives for each stage of the course are available to all students in an online handbook to ensure that these are stage-appropriate, and training in reflective practice is part of both the pre-clinical and clinical curriculum. These aims and objectives are reviewed and discussed with the VSCS both before and after each placement. Fully completed paperwork for each placement is required for a student to progress onto the Finals Part 2 examinations. This is

monitored by the EMS administrators and EMS Co-Ordinators in conjunction with the individual VSCS for each student. For students graduating in 2025 and 2026, this process is recorded via an online Moodle page. For students graduating in 2027 and beyond, this is via the E-Portfolio platform MyProgress. For students graduating in 2030 and beyond, the same process is in situ for AHEMS placements in addition to CEMS and is also administered via the E-Portfolio platform MyProgress.

The E-portfolio was externally examined for the first time in 2023-24 and will continue to be examined going forwards as part of the final VetMB. The summative examination occurs at the end of the VetMB course. The examination team included an internal examiner and external examiner, with certain assets completed by the student relating to CEMS have already undergone formative assessment with written or verbal feedback by the student's VSCS. For 2027 and 2030 graduates, written feedback from VSCSs on student's assessment of their independent learning on CEMS is mandatory. Also mandatory for those year groups is the assessment of the student's reflective writing by the VSCS using a simple marking rubric. This rubric is intended to guide students to the expected standard with their reflective writing and also to focus students on consciously engaging with the reflective process within their independent learning on EPTs. The VSCSs receive training on how to use the rubric, and VSCSs will follow up sub-standard performance with a discussion in the one-to-one VSCS termly meetings. When E-portfolios are undergoing summative marking, a random selection have scores and written feedback reviewed, as a quality assurance measure. The written feedback for all assets is held within the MyProgress E-portfolio software to facilitate students being able to tangibly interact with their complete learning journey and give opportunities for personal reflection on previous feedback. These changes will be rolled out to subsequent year groups.

Students also complete reflective essays on their experiential learning, which includes experiences from EPT. Students are marked on their reflective writing quality, which whilst it does not specifically quality assure the EPT placements, it does actively engage students in personal assessment of their experiences and the active curation of their independent learning. These reflective essays are centrally marked to rubrics with blind marking and double marking of 10% the cohort as quality assurance measures.

Regarding quality assurance of the E-portfolio process itself, firstly the external examiner has extensive experience of portfolio marking for a UK veterinary degree, facilitating comparison and non-formal, standard setting between universities. Anonymous student feedback is sought on the E-portfolio, and the external examiner meets with students as part of their assessment, with the feedback included in the external examiner report.

Students can notify the VEE about issues occurring during EPT (and at any other time during their studies) by contacting the VEE by e-mail or telephone, including 24/7 support through the College Porter system who can be contacted if an issue is urgent at any time. They can also be reported via an online form on the E-Portfolio. The E-Portfolio platform includes a 'welfare check-in' system where students can indicate if the placement is going well (no need for further contact), placement not going well, (need for contact within 2-3 working days), placement not going well (urgent contact within 1 working day) or placement not going well (requiring immediate help). In the case of the last option, students are advised to contact their college Porters, who are available 24/7.

Reports can be made anonymously. All reports of issues on EMS are recorded on a centralised spreadsheet, accessible only by the Veterinary Studies Programme Manager and the EMS Co-Ordinators to maintain confidentiality. This spreadsheet includes details of the issue and the

outcomes. Where reports are not made anonymously, students and the VSCS are informed of the outcome of any concerns raised. Placements may be permanently removed from the approved placement provider list if the reported issues are of significant concern and a central list is maintained of all removed placements to prevent re-admission onto the database later. Students are signposted to relevant central support systems, such as the Harassment and Violence Support Service and the Student Counselling service, local support such as the Pastoral Support Team, to College support systems such as their College Tutor for pastoral support.

Comments on Area 3
We have a comprehensive course which includes a high number of hours of core clinical training. The time spent by students on practical clinical training has been increasing in recent years and we intend to continue to expand this area of teaching in place of traditional didactic lectures. The introduction of the E-portfolio and Learning Opportunities Log has allowed student clinical achievement and learning objectives to be recorded.

Suggestions for improvement in Area 3
ILOs are still needed for all individual teaching units in Years 1 and 2, but we aim to have established these for all teaching in Years 1 and 2 by the start of academic year 2025-26. Standardisation of QA procedures across Years 1 and 2 and 4-6 of the curriculum would be beneficial.

Area 4. Facilities and equipment

Standard 4.1: All aspects of the physical facilities must provide an environment conducive to learning, including internet access at all relevant sites where theoretical, practical and clinical education takes place. The VEE must have a clear strategy and programme for maintaining and upgrading its buildings and equipment. Facilities must comply with all relevant legislation including health, safety, biosecurity, accessibility to people including students with a disability, and EU animal welfare and care standards.

Location and Organisation of the Facilities used for the Veterinary Curriculum
Teaching of the veterinary curriculum occurs across two main sites; the University campus in central Cambridge (Downing and New Museums Sites) and the Department of Veterinary Medicine on the West Cambridge Site (approximately 2 miles from central Cambridge; see *Appendix 4.1 Map of West Hub & Vet School*). Years 1 and 2 are mostly taught in central Cambridge (*Appendices 4.1 Map New Museums Site* and *4.1 Map of Downing Site*) with some seminars and practical sessions taking place in the Department of Veterinary Medicine. Years 4-6 are taught entirely at the Department of Veterinary Medicine (see *Appendix 4.1 Map of Vet School Site*). All lecture theatres and teaching spaces have wheelchair access and have facilities for lecture capture and recording.

Maintaining and Upgrading the Current Facilities and Equipment
Day to day support for facilities and equipment is delivered by local teams who are the first point of contact for staff (and students). More significant maintenance work and capital projects are delivered by the University's Estates Division. Major capital projects beyond regularly scheduled maintenance and refurbishment are funded by bidding for building costs to the central University or School of Biological Sciences, by writing grants for UKRI funding or by philanthropic donation. The University's Estates Division also has funding available for 'minor' works that can be applied for and our major refurbishments have come through this route in the last 5 years. The Estates Division prioritises applications, with safety considerations being given high priority.

How the VEE ensures that all physical facilities comply with all relevant legislation
The VEEs infrastructure is maintained and inspected by Facilities teams who are supported by the University's Estate Management and Safety Office teams who co-ordinate statutory inspections and testing as well as major maintenance or development works. This includes water, fire, electrical, ventilation, asbestos monitoring, pressure vessels and security. A new inspection programme has been implemented by the Department of Veterinary Medicine that inspects all teaching spaces for veterinary students (used from Years 1-6) including auditing safety aspects of the spaces.

Risk assessments are undertaken for all teaching activities, and these are uploaded to Moodle prior to any teaching sessions. Any accidents, incidents or near misses are reported on the University's Assessnet system: this is a web-based system which sends out automatic emails to notify the Departmental Safety Officer of an incident and to initiate an investigation. The University Safety Office oversees the system to ensure any actions from the incident and its investigation are implemented. Each Departmental Safety Committee has representatives from different work areas of the department, the School of Biological Sciences Safety Officer and the University Head of Biological Safety. Membership includes Departmental Biological Safety Officers, Laser Safety Officers and Radiation Protection Supervisors. Its remit is to review and monitor the precautions taken to ensure safety at work and to ensure that the safety policy and the codes of safe working practices are kept up to date, to promote co-operation and involvement in safety matters by all staff and students and where necessary consider accidents/incidents and remedial action, and to consider safety reports, the safety content of training and the development of safe working procedure, including physical aspects of working spaces.

Standard 4.2: Lecture theatres, teaching laboratories, tutorial rooms, clinical facilities and other teaching spaces must be adequate in number and size, equipped for instructional purposes and well maintained. The facilities must be adapted for the number of students enrolled. Students must have ready access to adequate and sufficient study, self-learning, recreation, locker, sanitary and food service facilities.
Offices, teaching preparation and research laboratories must be sufficient for the needs of the teaching and support staff to support their teaching and research efforts.

Lecture theatres, laboratories and seminar rooms in use for teaching of the veterinary curriculum are shown on table 4.2.1 below:

Table 4.2.1 - Lecture theatres used for teaching of the veterinary curriculum

Lecture Hall	Location	Capacity
Bristol-Myers Squibb	Dept of Chemistry, Lensfield Road	450
Babbage	New Museums Site	440
Biffen	Downing Site	170
Hopkinson	New Museums Site	115
Anatomy Lecture Theatre	Downing Site	300
Vet School LT1	Dept of Vet Medicine	118
Vet School LT2	Dept of Vet Medicine	85

Bristol-Myers Squibb, Babbage, and Biffen lecture theatres were recently refurbished with high specification AV equipment and lecture capture facilities. These lecture theatres are equipped with disabled access and accessible toilets nearby. Lecture-based teaching in Years 4 and 5 takes place

in two lecture theatres (LT1 and LT2) furnished with high-specification AV equipment and lecture capture facilities. LT1 has recently been refurbished.

Table 4.2.2 - Laboratories and other practical facilities used for teaching of the veterinary curriculum

Laboratory	Location	Capacity
Veterinary Anatomy Dissection Room	Dept of Anatomy, Downing Site	65
Physiology Experimental Classroom	Department of Physiology, Development and Neuroscience, Downing Site	120
Histology Classroom	Department of Physiology, Development and Neuroscience, Downing Site	110
Biochemistry Teaching Classroom	Dept of Biochemistry, Downing Site	30
Pathology Laboratory	Dept of Pathology, Downing Site	99
Pharmacology Laboratory	Dept of Pharmacology, Tennis Court Road	100
Teaching Laboratory	Dept of Veterinary Medicine	60
Post-Mortem Room – Small Animal	Dept of Vet Medicine	30
Post-Mortem Room – Large Animal	Dept of Vet Medicine	30
Pauline Brown Clinical Skills Centre	Dept of Vet Medicine	35
Merton Hall Farm	Dept of Vet Medicine	35

The Veterinary Anatomy Dissection Room (DR) is fitted with several screens and a camera allowing students to watch dissections performed by the demonstrator. Pre-recorded videos and ultrasound scans can be displayed on the screens in the DR. Video capture of practicals allows students who might have missed a session to catch up and provides a resource for student revision. In the Physiology Classroom, students use data acquisition software to carry out mini experiments, such as looking at respiratory gases during exercise. The Pathology teaching laboratory is used for hands-on practical teaching (e.g. microbiology). Information is displayed to students on large screens and demonstrators are present at the session to assist students. Stations are equipped with the equipment for each practical (e.g. microscopes, computers, laboratory consumables, pipettes etc). The laboratory is run at UK Advisory Committee on Dangerous Pathogens (ACDP) level 2 (containment/Biosafety level 2; BSL-2) for use with live viral, bacterial and fungal experiments, and students have access to a wide variety of histopathology and preserved organ/tissue specimens. Online practical sessions are being developed, with positive student feedback. The teaching laboratory in the Department of Veterinary Medicine can accommodate 60 students, used primarily for large group practical teaching sessions in Years 4 and 5 (delivered as half-year classes). It is equipped with teaching microscopes and newly installed AV equipment, linked to a demonstration microscope.

Table 4.2.3 – Seminar rooms used for teaching of the veterinary curriculum

Laboratory	Location	Capacity

Veterinary Anatomy Museum	Dept of Anatomy, Downing Site	48
Bioinformatics Training Room	Craik Marshall Building, Downing Site	48
Biochemistry Teaching Room 1	Dept of Biochemistry, Downing Site	40
Old Library Space	Dept of Vet Medicine	60
Seminar Room 1	Dept of Vet Medicine	15
Seminar Room 2	Dept of Vet Medicine	25
Seminar Room 3	Dept of Vet Medicine	25
Equine Seminar Room	Dept of Vet Medicine	15
Farm Animal Seminar Room	Dept of Vet Medicine	15
West Hub Seminar Rooms	West Cambridge Site	30-50

Student recreational facilities
Students in the University central campuses are close to the recreational facilities of Cambridge itself, with many shops, cafes and restaurants nearby. The majority of students will also be in close proximity to their College, which also has catering, sports (including gym) and library facilities. Lockers for students are available in the Department of Anatomy. The University Library, located within 1 mile of the University central campus is open to all students from 0900-1800.

Students at the Department of Veterinary Medicine are provided with changing and showering facilities within the Student Resources Centre where there are clean and dirty changing areas with individual lockers, toilet and shower facilities on the ground floor. Other changing facilities are in the Large Animal Unit, the postmortem room suite, small animal theatre block and large animal surgery building. The Student Resources Centre also provides students with a social area, kitchen facilities, quiet work area, lockers and toilet facilities on the first floor. For faculty and staff, the staff tearoom provides coffee/tea facilities, microwaves for warming pre-prepared food and a social space to relax. There are smaller rooms available to staff for making tea and eating sandwiches within the small and large animal facilities. Vending machines are available to staff and students for food and drink. The West Hub has a range of different food outlets and study spaces. The library at the West Hub is open to all students. The University Sports Centre and Gym is also at the West Cambridge Site.

Staff Offices and Research Laboratories
All staff are provided with office space, computers, internet access, telephones, printing and photocopying facilities. Research laboratories within the Department of Veterinary Medicine are fully equipped to undertake all fundamental science investigations. These include a clinical research laboratory, the Surgical Discovery Centre, containment level 1, 2 and 3 laboratories, with specialist equipment for immunology, cell biology, microbiology, molecular biology, DNA sequencing and mass spectroscopy.

Standard 4.3: The livestock facilities, animal housing, core clinical teaching facilities and equipment used by the VEE for teaching purposes must:

- **be sufficient in capacity and adapted for the number of students enrolled in order to allow safe hands-on training for all students**
- **be of a high standard, well maintained and fit for the purpose**
- **promote best husbandry, welfare and management practices**

- **ensure relevant biosecurity**
- **take into account environmental sustainability**
- **be designed to enhance learning.**

The University Farm (3.7 miles from the Department of Veterinary Medicine) is a 240-cow dairy unit with a flock of 230 breeding ewes maintained for veterinary teaching. The University Farm was recently joined the sustainable farming charity LEAF (Linking Environment and Farming) scheme as a Demonstration Farm, in recognition of its commitment to reducing the carbon footprint of its dairy enterprise. There are hand washing, boot washing and changing facilities with showers for staff and students.

The University Farm includes purpose-built facilities for student teaching of farm animal studies. In addition, Merton Hall Farm (MFH) is the live animal teaching unit based at the Department of Veterinary Medicine. Eight horses and three cows reside permanently at MFH. In addition, twelve sheep, owned by the University Farm, are housed on site during term time. Merton Hall Farm is an American barn style facility with basic amenities for faculty, staff and students, with two seminar rooms and a tack room designed for teaching. The horses and cows live out all year, are brought in for classes during the day, and are housed only during especially bad weather. This is to ensure that animals have freedom from the constraints of teaching and minimizes the chance of them acquiring stable vices. We have field shelters that are mainly used by cows and sheep. A diary record of the use of animals is submitted annually to the Department's Animal Ethics and Welfare Committee. All classes are booked through the yard manager who selects animals suitable for each session, ensuring that the animals are not overused, and their welfare is protected.

Large animal isolation facilities within the Large Animal Unit at the Department have just been refurbished, are being snagged and are not yet active. However, SOPs are in place as are RAs, including for the use of temporary isolation facilities should the need arise. Small animal isolation facilities are active and in use and have SOPs and RAs in situ (see *Appendix 4.6 SOP Isolation (Small Animal)*).

The College of West Anglia (5.9 miles from the Department) at Milton houses a number of exotic and bird species that are utilised for practical teaching of animal handling and husbandry of these species.

Clinical Skills Facilities

The Clinical Skills facilities include the Pauline Brown Clinical Skills Centre and Merton Hall Farm. These are evidence- and research-based clinical skills teaching facilities, consisting of multi-functional skills rehearsal spaces, a diagnostic imaging room and a teaching consultation room. They are available to students throughout the entirety of their course in a variety of ways, including timetabled sessions, peer-assisted learning workshops, one-to-one tutorials and 24/7 access drop-in usage. Over 100 clinical skills, relating to a range of species and disciplines, are available to students, supported by illustrated instruction booklets and video demonstrations. The learning of clinical skills is delivered in the Centre in a variety of ways, from basic animal handling and task-based training using bench-top models, to the rehearsal of clinical skills in sequence and through case-based scenarios. Both are active participants at veterinary education conferences and contributes to the supervision of student elective projects involving the creation and validation of clinical skills teaching aids.

Pathology Facilities

The post mortem facility (Gresham Building) provides dedicated large and small animal necropsy rooms with viewing facilities, trimming room, tissue storage facility, and laundry. The post mortem suite is accessed through changing and shower facilities and has a technician's office with separate changing facilities. There are computer links to the pathology database, with equipment for digital photography and facilities for digital image projection. The diagnostic anatomic pathology service provides biopsy and necropsy services for the clinical services at the Department of Veterinary Medicine, the RSPCA Clinic and external practices (both large and small animal). The Department's diagnostic anatomic pathology service is also a disease surveillance partner for the UK Government Animal Plant and Health Agency (APHA), carrying out diagnostic surveillance necropsies on a range of farm animals including large and small ruminants and pigs. For the academic year 2024-2025 onwards, case numbers for pig pathology teaching have been significantly enhanced through a new partnership with a local pig unit. In this arrangement, the diagnostic pathology team providing necropsy assessment of deceased animals from this unit, using these cases specifically for teaching for both the Year 6 rotation and Year 4 small group clinical practical classes. Thus, students in both the Year 6 and Year 4 small group clinical practical classes benefit from exposure to the diverse range of cases seen by the diagnostic pathology necropsy service, including farm animals, horses, and small companion animals. A notable aspect of the service is the range of different types of cases seen, with many companion animal cases referred for necropsy from colleagues in external primary care practices, as well as from the referral hospital on site. Further enhancements currently being enacted include increased exposure to equine necropsy through an arrangement with a fallen stock collector. Pathological specimens for student teaching are held within the teaching laboratory at the Department of Veterinary Medicine.

Premises used for the practical teaching of FSQ & VPH

VPH teaching uses the abattoir at the University of Bristol Langford campus. The abattoir operates as a full-throughput, four-species (Bovine, Ovine, Porcine and Caprine) facility for teaching and research. The abattoir is approved by the UK competent authority (Food Standards Agency) under the retained Regulation 852/2004/EC (on the hygiene of foodstuffs), Regulation 853/2004/EC (on specific hygiene rules for food of animal origin); Regulation (EU) 2017/625 (on official controls) and Regulation 1099/2009/EU (on the protection of animals at the time of killing) as amended by Regulation (EU) 2017/625. The abattoir has a full-time attendance of a government Official Veterinarian (EU 2019/624). All abattoir staff are trained Animal Welfare Officers (1099/2009 EU) and complies with all legislation with regard to animal welfare, biosecurity and animal by-products. Students are accompanied and tutored by our VPH teaching fellow. The VPH team also has a dedicated Meat Industry Training room with the largest collection of historical stunning and slaughter devices in the UK, used for research, teaching and student discussion. The room also houses a VPH library, a simulation Holstein Cattle head for captive bolt training, and simulation piglets of various sizes for non-penetrating captive bolt training.

Standard 4.4: Core clinical teaching facilities must be provided in a veterinary teaching hospital (VTH) with 24/7 emergency services at least for companion animals and equines. Within the VTH, the VEE must unequivocally demonstrate that the standard of education and clinical research is compliant with all ESEVT Standards, e.g. research-based and evidence-based clinical training supervised by teaching staff trained to teach and to assess, availability for staff and students of facilities and patients for performing clinical research and relevant QA procedures.

The clinical teaching uses facilities of the Veterinary School Clinical Services which include:

- The Queen's Veterinary School Hospital (QVSH)
- Cambridge local branch of Royal Society for the Prevention of Cruelty to Animals (RSPCA) clinic
- Cambridge Equine Practice
- Cambridge Farm Animal Veterinary Services (Farm animal practice).

Standards of care and facilities are monitored by the RCVS Practice Standards Scheme, which is a recognised National Veterinary Practice Standards scheme. The inspection in 2021 accredited the QVSH Small Animal Hospital, Cambridge Farm Animal Veterinary Services, and the Cambridge Equine Hospital. The most recent inspection was completed in December 2024, after the closure of the equine hospital, so the Equine Practice was inspected as an Equine Practice. All our clinics are operational 24 hours, seven days a week.

The QVSH is a large multi-disciplinary small animal referral hospital and primary care practice. It is a purpose-built hospital which houses specialist equipment and facilities. The QVSH provides resources for small animal clinical teaching at undergraduate and postgraduate level, and for clinical research.

The QVSH on-site facilities include:

- Client reception & waiting area (Gold Cat Friendly Clinic status)
- Client parking
- 8 canine consultation rooms
- 1 cat friendly consultation room
- 4 canine wards, with capacity of 56 patients
- 2 cat wards, with capacity of 30 patients
- Isolation Ward, with capacity of 8 patients
- Critical Care/Intensive care unit, capacity of 7 patients (includes oxygen kennels)
- Central main pharmacy, with satellite pharmacies in the Small Animal Hospital
- Out of hours laboratory
- 5 operating theatres
- 4 anaesthesia induction bays
- Minimally invasive surgical suite
- Imaging facilities - four X-ray suites and two colour-flow Doppler ultrasound machines, a small animal MRI, nuclear medicine unit, video endoscopy, thermography and fluoroscopy. A commercial partnership with Cambridge Radiology Referrals provides CT facilities on site. A high field MRI Unit (Burgess) visits the site twice weekly. On site high field MRI has been purchased and will be delivered in January 2025.

The Cancer Therapy Unit (CTU) accommodates a linear accelerator to provide radiation therapy for small and large animals. There is a dedicated chemotherapy delivery room in this building. and Cambridge Radiology Referrals CT scanner is also located in the CTU. Diagnostic laboratories offer routine biochemistry, haematology, and cytology testing, and has microbiology and parasitology diagnostic laboratories. In the histopathology laboratory, facilities are available for routine histology, immunohistochemistry and the production of frozen sections.

Small Animal Services offered by QVSH:

BOAS Assessments	Cardiology	Dermatology

Emergency & Critical Care	HCM Clinic	Hip & Elbow Scoring
Imaging (including high field MRI)	IVDD Screening	Internal Medicine (Canine and Feline)
Neurology & Neurosurgery	Oncology (Medical Oncology and Radiotherapy)	Ophthalmology
Orthopaedics	Pain Clinic	Physiotherapy
Primary Care Practice	Soft Tissue Surgery	Canine Genetic Testing

The Cambridge local branch of the RSPCA clinic is a busy first-opinion practice, offering veterinary care to low-income pet owners. There is parking available on-site together with easy access to the branch by public transport. The practice provides students exposure to consultations, medical workups and surgical procedures. Surgical, imaging procedures and laboratory testing is carried out at the QVSH. Cases which require further investigation or treatments are transferred to the QVSH, where the students take responsibility for their management.

On-site facilities include:

- Client reception and waiting area
- Client parking
- 3 consultation rooms
- Pharmacy.

Cambridge Equine Clinic is a first opinion practice that provides full ambulatory and clinic-based services to clients whose horses are stabled within a 40-mile radius of the clinic, 24 hours a day and 365 days of the year. There are four veterinary surgeons working in the first opinion practice, in conjunction with an experienced nursing and client services team which is shared with the farm animal practice. A comprehensive and diverse range of services are offered including routine healthcare, vaccination, annual health checks, worming, passports and micro-chipping, pre-purchase examination, lameness evaluation, dental care and many more treatments, including elective surgery and reproductive services. On-site facilities include seven stables in the Equine Diagnostic Unit (EDU) with a further three stables in the intensive care unit (one of which converts into a large mare/foal stable). There are separate Equine & Farm Animal isolation facilities which have recently undergone extensive refurbishment and are in the process of final “snagging” work prior to becoming operational. There are a further six loose boxes in the LAU, an indoor menage, a hard lunge area, and a hard trot up area, and four small turnout paddocks.

Cambridge Farm Animal Veterinary Services (Farm animal practice) is a primarily ambulatory practice that provides veterinary services to University animals and other local clients. The focus of the service is on teaching and utilising local clients to provide the best demonstration of quality farm clinical services to students and clients. There is a dedicated team of five Farm Animal Clinicians, as well as two Junior Clinical Training Scholars (interns), along with a dedicated Farm Animal Technician. The onsite farm animal facilities are purpose built, comprising five large pens suitable for adult cattle, groups of sheep, goats and camelids, with three suitable for adult bulls, including a cattle race, which was installed in December 2023. Two smaller pens are suitable for small ruminants (calves, sheep, goats), camelids and pigs. There are separate Equine & Farm Animal isolation facilities which have recently undergone extensive refurbishment, although they are still being ‘snagged’ and are not yet in clinical use.

All teaching within the VTH is research-led and evidence-based and training is supervised by specialists in their discipline, with the assistance of speciality trainees (residents) and interns. Within the ambulatory clinics and RSPCA clinic, teaching is delivered by experienced general practitioners. All teaching staff within the VTH are encouraged to enrol on a quality assured teacher training programmes organised by the University (See Standard 9.3 for further details) and the vast majority have completed these programmes.

Standard 4.5: The VEE must ensure that students have access to a broad range of diagnostic and therapeutic facilities, including but not limited to clinical skills laboratory, diagnostic imaging, clinical pathology, anaesthesia, surgeries and treatment facilities, intensive/critical care, ambulatory services, pharmacy and necropsy facilities. Procedures and facilities should also be available for soft skills training, e.g. communication skills training through role-play.

The Pauline Brown Clinical Skills Centre is available to students throughout the entirety of their course in a variety of ways, including timetabled sessions, peer-assisted learning workshops, one-to-one tutorials and 24/7 access drop-in usage. The relevant diagnostic and clinical facilities are all available through the QVSH, Cambridge Equine Practice and Cambridge Farm Animal Clinical Services. Communications skills are taught through our communication skills small group clinical practicals which include actors who role play consultations with students. These include routine consultations, breaking ‘bad news’ to clients and euthanasia consultations (including associated practical considerations).

Standard 4.6: Appropriate isolation facilities must be provided to meet the need for the isolation and containment of animals with communicable diseases. Such isolation facilities must be properly constructed, ventilated, maintained and operated to provide for the prevention of the spread of infectious agents, animal care and student training. They must be adapted to all animal species commonly handled in the VTH. When permanent isolation facilities are not available in any of the facilities used for clinical training, the ability to provide such facilities and the procedures to use them appropriately in an emergency must be demonstrated during the visitation.

There is a small animal isolation ward distant from the main wards with separate entrance and changing facilities. There are also Equine & Farm Animal isolation facilities which have recently undergone extensive refurbishment, currently these are not operational while design errors are being dealt with. We expect to have this facility operational no later than the end of April 2025 subject to satisfactory completion of final works. Standard Operating Procedures and Risk Assessments are in place for isolation facilities (see *Appendix 4.6 SOP Isolation (Small Animal))*. There are Standard Operating Procedures and Risk Assessments in place for temporary Equine and Farm Animal isolation arrangements, and draft documents for the permanent facilities that will be finalised once the facilities have been completed.

Standard 4.7: The VEE must have an ambulatory clinic for production animals or equivalent facilities so that students can practise field veterinary medicine and Herd Health Management under the supervision of teaching staff.

Field veterinary medicine is taught to all students during their compulsory farm animal clinical rotation, with students attending visits with the ambulatory farm animal veterinary practice, which is run by the vet school that services farm animal clients within a 40-mile drive of the department.

Herd Health Management teaching is taught to students with visits to the farm animal ambulatory practice and they have a compulsory week on the farm animal rotation covering herd and flock health management.

The farm animal practice has 4 FTE clinicians, assisted by 2 FTE Junior Clinical Training Scholars and supported by the large animal nursing and technician teams shared with the equine clinics. Herd Health teaching is supported by academic staff and a local pig practitioner (Table 4.7.1). The ambulatory practice has three 8-seater vans acting as mobile hospitals, fully equipped with diagnostic and surgical equipment expected of a modern farm animal veterinary practice, including ultrasound scanners, access to endoscopy and mobile x-ray. Herd Health teaching is enhanced with access to data analysis software.

Table 4.7.1: Farm Animal Teaching Staff (November 2024). HH = herd health

Name	Role	FTE	Teaching
Ian McCrone	Clinician	1	Field / HH
Patricia Simoes	Clinician	1	Field / HH
Elly Po	Clinician	0.6	Field / HH
Andre Baptista	Clinician	1	Field / HH
Maedee Burge Rogers	Clinician	0.4	Field / HH
Emma Slater	JCTS	1	-
Rebecca Devlin	JCTS	1	-
Sarah Seaman	Head REVN		-
Steph Moss	REVN	0.6	-
Claire Martin	REVN	0.4	-
Robert King	Technician	1	-
Lynn Martin	Nursing Technician	0.8	-
Claire Payne	Technician	1	-
Mark Holmes	Academic		HH
Dan Tucker	Academic		Pig HH
John Gibson	Academic		HH
John Hayden	Pig Practitioner		Pig HH
Milorad Radakovic	Academic		VPH

Standard 4.8: The transport of students, live animals, cadavers, materials from animal origin and other teaching materials must be done in agreement with national and EU Standards, to ensure the safety of students and staff and animal welfare, and to prevent the spread of infectious agents.

Transport of students to extra-mural placements taxis or coaches operated by third parties are used. Where the teacher of a session has D1 licence they can transport students with departmental 16-seater minibus. Three 8-seater vans used by farm animal practice (all drivers have undergone a driver assessment if taking students). Cadavers or tissues will occasionally be transported to the post-mortem facility in ambulatory vehicles as appropriate according to health and safety policies. Two livestock trailers are available for the transport of animals for small ruminants, pigs, camelids, and adult cattle. Any staff member transporting animals has suitable training.

Standard 4.9: Operational policies and procedures (including biosecurity, good laboratory practice and good clinical practice) must be taught and posted (in different languages if the curriculum is taught in them) for students, staff and visitors and a biosecurity manual must be developed and made easily available for all relevant persons. The VEE must demonstrate a clear commitment for the delivery and the implementation of biosecurity, e.g. by a specific committee structure. The VEE must have a system of QA to monitor and assure clinical, laboratory and farm services, including regular monitoring of the feedback from students, staff and clients.

The VEE at the Departmental level has Biological Safety Committees reporting to Safety Committees; these have oversight of biosecurity for personnel and laboratories. Each committee has the Departmental Biological Safety Officer represented on it and meets three times a year. Reports are taken to University level with the University Biological Safety Sub-Committee who report to the Consultative Committee for Safety. They ensure that measures are in place to comply with Health and Safety and Environment Agency regulations for the UK. This is done by both internal audit by Departmental personnel but also by 'external' audit by Safety Office personnel. All personnel must be trained before working unsupervised and this must be recorded. There are training courses run by the University Safety Office and also bespoke training can be commissioned. All work must be risk assessed and approved before commencing. Risk assessments and standard operating procedures are available on the QVSH shared drive and for research groups, or other areas of departments, in their own shared file spaces or hard copy folders. There is also a QVSH Infection Control Committee to oversee policies and procedures around biosecurity within the clinical areas and University Farm (the farm also has its own safety committee). This committee reports to the Clinical Operations Group and also to the Departmental Safety Committee. They have standard operating procedures for work on the University Farm and in the clinical areas of the QVSH for clinical cases that may have contagious diseases. Personnel have access to the risk assessments and standard operating procedures for barrier nursing these cases in the isolation units on the relevant shared drive sections. Students receive health and safety inductions at the start of Year 1 and 4. Risk assessments are available to them on their course Moodle pages for intramural teaching sessions and the QVSH. For extramural studies (EMS), they must provide risk assessments for the type of work that they will undertake on placement if the placements are anything other than standard clinical practice or animal handling placements in the UK. All premises must provide the VEE with information on their Health and Safety procedures to assess whether they are suitable. The student risk assessments must be signed by VSCS and Departmental Safety officer for overseas and higher risk placements before they can be considered as part of the course EMS. We may also refer travel risk assessments to the University Study Away Risk Assessment Committee if they are particularly high risk. This committee will take external advice and may put in place specialist mitigation measures before allowing travel. All personnel including students have access to handwashing and boot washing facilities, changing rooms to remove PPE and showers if needed. The VEE has an anonymous reporting system for feedback from staff or students that allows them to feedback any concerns around this area. We have recently initiated audits of teaching spaces including safety of the premises and consider biosecurity as part of this.

Comments on Area 4

Students at the VTE have access to a wide variety of purpose-built facilities designed to enhance teaching and learning across all years of the course. Our biggest strength is the small group teaching that we are fortunate to facilitate throughout all years of the course and our teaching spaces deliberately provide authentic learning environments for these small groups. The facilities at the Department are designed to offer a blend of contextually appropriate teaching, including lecture

theatres, laboratories, postmortem facilities and our exceptional clinical skills facilities complete with in-house teaching animals. The four integrated veterinary practices enable exposure to first opinion cases from Year 4-6 inclusive, enhancing the integration of non-lecture based clinical teaching within the curriculum. Referral cases are seen in several rotations in Year 6 alongside first opinion rotations, ensuring balanced exposure to cases with more extensive diagnostic and therapeutic options.

Suggestions for improvement in Area 4

Our large animal isolation facilities have recently undergone extensive refurbishment, but due to ongoing snagging works they are not currently clinically active spaces, although temporary facilities are available should the need arise. Finalising the permanent large animal isolation facilities will enhance teaching opportunities. The recent closure of the equine hospital has reduced opportunities for exposure to equine hospital practice. Formalising already established links with local equine hospital practices for ‘elective’ rotations will ensure ongoing exposure to more complex equine cases for students with an equine interest.

Area 5. Animal resources and teaching material of animal origin

Standard 5.1: The number and variety of healthy and diseased animals, first opinion and referral cases, cadavers, and material of animal origin must be adequate for providing the practical and safe hands-on training in all relevant areas and adapted to the number of students enrolled. Evidence must be provided that these data are regularly recorded and that procedures are in place for correcting any deficiencies.

The strategy of the VEE for the use of animals and materials of animal origin
Animal handling and husbandry classes in Years 1 and 2 include live anatomy for cats, dogs and horses. The VEE keeps a core number of animals to be used for teaching, in addition to working with local providers to support access to animal species (e.g. College of West Anglia for exotic animal species). The VEE maintains a register of dogs owned privately by staff that are available for handling classes, following behavioural assessment. The University Farm has a 240-cow dairy herd, and a herd of approximately 230 sheep. Student involvement in the University Farm is Year 1 animal handling sessions, Year 4 and 5 small group clinical practicals and CCT delivered in Year 6. Use and welfare of animals is monitored by the Department Ethics and Welfare Committee, with an audit carried out annually. Our clinical skills centres are equipped with a large range of models that allow students to practice and refine clinical procedures and to prepare to make best use of practical sessions with live animals. Examples of these include the use of the haptic cow simulator prior to practical reproductive examination sessions in cattle.

Ensuring that each student receives the relevant Core Clinical Training (CCT)
CCT takes place over Year 6 of the veterinary curriculum, although some elements are also taught in Years 4 and 5. CCT is delivered within the QVSH, RSPCA Clinic, Cambridge Equine Practice and Cambridge Farm Animal Veterinary Services whereby students are exposed to a wide range of cases from different species, that are both out-patients and hospitalised cases that are acute and chronic in nature and that present in a general practice and referral context. Further details are provided in Standard 4.4.

Ensuring the welfare of animals used for educational and research activities
The welfare of animals used for educational activities is reported to, monitored, reviewed and reported on by the Department of Veterinary Medicine Ethics and Welfare committee (EWC). EWC is also responsible for the annual review and update of VEE teaching animal welfare policies, in line with local requirements and accreditation standards. Teaching staff are responsible for monitoring and safeguarding the welfare of the animals in their teaching sessions and reporting any concerns to the EWC. All animal and veterinary research conducted by VEE staff or students requires prior ethics approval by the EWC. Animal research in the UK is controlled under the Animal Scientific Procedures Act (ASPA) and the EWC ensures compliance with legislation. EWC also review clinical veterinary research applications, and animal research which sits outside of ASPA (e.g. observational research). EWC provides guidance to staff and students undertaking clinical veterinary research, and the preparation of ethics applications.

How cadavers and material of animal origin for training in anatomy and pathology are obtained, stored and destroyed

Anatomic pathology:
Training predominantly takes place using clinical cases sent to the Department of Veterinary Medicine veterinary anatomic pathology service for either surgical biopsy interpretation or post-mortem examination, including farm animal surveillance undertaken as an Animal Plant and

Health Agency (UK Government) surveillance pathology partner. In addition, some post-mortem examinations are undertaken on wildlife as part of pathology research projects (under approval of the Department's Ethics and Welfare Committee) and using donated cadavers from farms and individual pet owners (with appropriate consent).

Clients (or their representative) sign a consent form giving permission for tissue to be retained for teaching and research purposes. For diagnostic post-mortem cases, the majority of cadavers are stored at 4^{o}C in a designated chiller in the post-mortem suite and are examined soon after death. Less frequently, cadavers are received frozen and/or maintained frozen for a variable time interval. In this case, cadavers are stored in a designated walk-in -20^{o}C freezer in the post-mortem suite. The post-mortem suite is managed and maintained by a PM room manager assisted by a second technician.

Cadavers are disposed of by either mass cremation (W. Martins & Sons) or individual cremation (Peaceful Pets Crematorium; a pet cremation service in Norfolk) according to the client's wishes. Surgical biopsy specimens and selected tissues from post-mortem examinations are stored in 10% neutral buffered formalin for diagnostic and teaching purposes and are incinerated after 3 years.

Clinical and professional phase teaching on animal cadavers (e.g. dentistry, surgery, nerve blocking practicals etc):
Eighty percent of the large animal (cattle, small ruminants and pigs) cadavers and large animal parts are obtained from W. Martins & Sons abattoir in Essex. The remaining 20% of the material is obtained from additional local abattoirs such as Humphreys & Sons in Essex. Companion animal cadavers are donated for teaching and research purposes by owners whose pets are euthanased in the veterinary teaching hospital or at the RSPCA's charity clinic.

Material is stored in the walk-in freezer located in the PM room and described above. Material may be re-frozen and re-used where appropriate. W. Martins & Sons provide disposal services for category 1 waste. Cadavers are disposed of by either mass cremation (W. Martins & Sons) or individual cremation (Peaceful Pets Crematorium; a pet cremation service in Norfolk) according to the client's wishes.

Veterinary Anatomy teaching material Years 1 and 2

From Humphreys and Sons (Abattoir) we obtain;

- Viscera from Ox, Pig and Sheep. These are delivered frozen, towards the end of the summer, and stored in chest freezers. They are thawed for the relevant class and disposed of via yellow bag clinical waste.

From Blades Biological (a UK agent for Carolina Biological Supply, based in the USA) we obtain;

- Preserved foetal pigs. These are preserved in formalin and sealed individually in plastic bags. They are stored in a chiller (just for convenience, they don't need to be refrigerated) and disposed of via yellow bag clinical waste.
- Preserved dogs. These are preserved in formalin but shipped in 'Carosafe'. We further embalm them here and store them in thick, large plastic bags. These are stored in our embalming room until the start of the academic year and thereafter in a room adjacent to our dissecting room. They are put out for the relevant classes throughout the 1st and 2nd years of the course. All waste is disposed of in yellow bag clinical waste.

- Rats. These are frozen, stored in chest freezers and disposed of in yellow bag clinical waste.

In addition to the above;

- Rabbits (20), Pig (1), chickens (20), sheep (9) are dissected 'fresh' and disposed of via yellow bag clinical waste.

How animals and material of animal origin for pre-clinical and clinical training, and the clinical services provided by the VEE are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Ongoing review of the veterinary programme occurs though the Clinical Curriculum Review Group (CCRG) with oversight by the Veterinary Education Committee (VEC). The CCRG consider quality assurance data such as student and employer feedback data collected and reviewed by the Education Quality Improvement Programme (EQIP) group. This includes review of which procedures are taught and how, and the use of live animals or non-animal teaching models in teaching. The Teaching Operations Committee reviews actions proposed by the CCRG and implements as required. The structure and function of these committees is outlined in Area 1.

Table 5.1.1 Cadavers and material of animal origin used in practical anatomical training

Species	2023-24	2022-23	2021-22	Mean
Cattle	14	14	14	14
Small Ruminants	17	17	17	17
Pigs	54	54	54	54
Companion Animals (dogs)	16	16	16	16
Equine	48	48	48	48
Poultry & rabbits	40	40	40	40
Aquatic animals	0	0	0	0
Exotic pets	20	20	20	20
Other (avians)	0	0	0	0

Table 5.1.2 Healthy live animals used for pre-clinical training (animal handling, physiology, animal production, propaedeutics, ...)

Species	2023-24	2022-23	2021-22	Mean
Cattle	3	3	3	3
Small Ruminants	10	10	10	10
Pigs	0	0	0	0
Companion Animals (dogs)	4 per session	4 per session	4 per session	4
Equine	8	8	9	8
Poultry & rabbits	10	10	10	10
Exotic pets	0	0	0	0
Other	4 per session	4 per session	4 per session	4

Table 5.1.3 Number of patients* seen intra-murally (in the VTH)**

Species	2023-24	2022-23	2021-22	Mean
Cattle	28	10	8	15
Small Ruminants	120	83	62	88
Pigs	8	9	8	8
Companion Animals	9027	8578	7674	8426
Equine	260	383	368	337
Poultry & rabbits	43	28	35	35
Aquatic animals	0	0	0	0
Exotic pets	37	30	33	33

** Each patient must be officially recorded in the electronic patient record system of the VEE and must be individually examined/treated by at least one student under the supervision of at least 1 member of staff. Each live animal affected by one specific clinical episode is counted as one single patient, even if it has been examined/treated by several departments/units/clinics.*

*****Notes on origins of data for intra-mural cases***

Cattle, small ruminants, pigs, other (mainly camelids): Cases seen on site for procedures or care.
Companion animals: Cases seen at the QVSH, including those presenting from the RSPCA clinic for procedures or care.
Equine: Cases seen on site for procedures or care.
Exotic pets (includes gerbil, cavy, hamster, ferret, guinea pig, chinchilla, rat): Cases seen at QVSH for procedures or care, primarily those owned by RSPCA clients.
Other (camelids). Cases seen on site for procedures or care.

Table 5.1.4 Number of patients* seen extra-murally (in the ambulatory clinics)**

Species	2023-24	2022-23	2021-22	Mean
Cattle	7217	5712	9512	7480
Small Ruminants	1226	964	1132	1107
Pigs	106	49	65	73
Companion Animals	4125	3881	3528	3845
Equine	1944	2121	2017	2027
Poultry & rabbits	51	39	67	52
Aquatic animals	0	0	0	0
Exotic pets	68	71	92	77

** Each patient must be officially recorded and must be individually examined/treated by at least one student under the supervision of at least one member of staff. Each live animal affected by one specific clinical episode is counted as one single patient.*

*****Notes on origins of data for extra-mural cases***

Cattle, small ruminants, pigs, other (mainly camelids): Cases seen by the farm animal ambulatory team and not brought onto site. Includes animals at the University Farm.
Equine: Cases seen by the Cambridge Equine Practice (ambulatory, first opinion practice) and not brought onto site. World Horse Welfare cases are not included in these figures.
Exotic pets. (includes gerbil, cavy, hamster, ferret, guinea pig, chinchilla, rat): Cases seen at the RSPCA clinic.
Other (camelids). Cases seen by the farm animal practice (ambulatory). Do not present on site for procedures or care

Table 5.1.5 Percentage (%) of first opinion patients used for clinical training (both in VTH and ambulatory clinics, i.e. Tables 5.1.3 & 5.1.4)

Species	2023-24	2022-23	2021-22	Mean
Cattle	>95	>95	>95	>95
Small Ruminants	>95	>95	>95	>95
Pigs	>95	>95	>95	>95
Companion Animals	70	70	70	70
Equine	>95	>95	>95	>95
Poultry & rabbits	100	100	100	100
Exotic pets	100	100	100	100
Other	100	100	100	100

Table 5.1.6 Cadavers used in necropsy*

Species	2023-24	2022-23	2021-22	Mean
Cattle	9	13	25	16
Small Ruminants	40	60	101	67
Pigs	8	6	7	7
Companion Animals	156	110	167	144
Equine	5	0	1	2
Poultry & rabbits	10	20	8	13
Aquatic animals	2	0	0	0
Exotic pets	81	55	24	53
Other	113	173	59	115

**Data reflects the number of individual necropsies. Please note that several students will be involved in each necropsy.*

Table 5.1.7 Number of visits in herds/flocks/units for training in Animal Production and Herd Health Management

Species	2023-24	2022-23	2021-22	Mean
Cattle	146	120	116	127.3
Small ruminants	36	27	25	29.3
Pigs	15	15	15	15
Poultry	0	0	0	0
Rabbits	0	0	0	0
Aquatic animals	0	0	0	0
Other	0	0	0	0

Table 5.1.8 Number of visits in slaughterhouses and related premises for training in VPH (including FSQ).**

Species	2023-24	2022-23	2021-22	Mean
Ruminant slaughterhouses	4 days per student*	4 days per student*	4 days per student*	4 days per student*
Pig slaughterhouses	4 days per student*	4 days per student*	4 days per student*	4 days per student*

Species	2023-24	2022-23	2021-22	Mean
Poultry slaughterhouses	0	0	0	0
Related premises**	1 day per student*	1 day per student*	1 day per student*	1 day per student*
Others				

*** Premises for the production, processing, distribution or consumption of food of animal origin*
** Each student spends 3 days at the Bristol Abattoir and 1 day at Humphreys and Sons Abattoir. Both abattoirs are licenced for the slaughter of ruminants and pigs. The Humphreys and Sons visit includes a visit to the meat preparation and meat products facilities.*

Standard 5.2: In addition to the training provided in the VEE, experience can include practical training at external sites, provided this training is organised under the supervision of teaching staff and follows the same standards as those applied in the VEE.

All Year 4 students participate in all aspects of lambing the University sheep flock each spring. A self-selected group of Year 5 students act as student supervisors for the Year 4 lambing groups. Year 4 students are also involved in the management and husbandry of animals housed at Merton Hall Farm. Eight horses and three cows reside permanently on site. The RCVS also requires all students to undertake animal husbandry and clinical EPT placements which students organise themselves. A database of placements is maintained, and dedicated administrators and academic staff provide support to students. For further information, see Standard 3.6.

Standard 5.3: The VTH must provide nursing care skills and instruction in nursing procedures. Under all situations students must be active participants in the clinical workup of patients, including problem-oriented diagnostic approach together with diagnostic decision-making.

Description of how and by whom the nursing care skills are implemented and taught to undergraduate students
Year 4 and 5 students undertake small group clinical practicals which include nursing skills taught by registered veterinary nurses (RVNs) and vets (see *Appendix 5.3. 4th & 5th Year SGCP timetable*). In addition, Year 5 students each spend approximately 3 hours per day over seven successive days in the small animal VTH acquiring nursing skills under the direct supervision of RVNs. In these sessions, students are taught how to handle patients, administer oral and parenteral medications, use intravenous catheters and fluid administration pumps, amongst other nursing care skills. During Year 6, students routinely undertake nursing skills on all clinical rotations. Further details specific to small animal, large animal and equine rotations are available in *Appendix 5.3. 6th Year Rotation Handbooks (Farm, Equine, Small Animal).*

Students undertaking CCT in Year 6 are in groups sized of 3-4 students. Small group clinical practical teaching in Years 4 and 5 is delivered to groups of 7-8 students. For most rotations students are taught around a case on a 1:1 basis providing an excellent learning experience and on most Year 6 rotations clinical staff outnumber students.

Hands-on involvement of students in clinical procedures in the different species
During CCT students are extensively involved in clinical procedures in small animal, farm animal and equine species, particularly in Year 6. Year 6 is designed to facilitate a student's transformation to a practicing veterinary surgeon, and they are given extensive opportunities to

further develop technical skills, clinical competencies and reasoning, application of knowledge and professionalism. In our on-site dedicated VTH and primary care services, students have primary responsibility for the management of patients. Students make initial contact with the client, take the history, perform a clinical examination, then construct a list of problems and differential diagnoses before reviewing these with a veterinary surgeon. For hospitalised cases, they then perform at least twice daily clinical examinations, administer treatments, present their cases at rounds and communicate with the client. Students also have an active role in diagnostic imaging acquisition, the administration of anaesthesia, other diagnostic and therapeutic procedures, surgical procedures including neutering and post-mortem examinations. Students are exposed to veterinary business, ethics and professional practice throughout their time on clinical rotations. At all times students work under the supervision of qualified clinical staff. In addition, students gain supplementary hands-on involvement during their clinical extra-mural studies. Year 6 students complete a Learning Opportunities Log (LOL) which record the cases that they have seen and allows students the opportunities to reflect on their experience. Verbal and written feedback is given to students at the end of each rotation.

Procedures for student discussion, thinking and reading to deepen their understanding of the clinical case and its management

In Year 5, students engage in clinical reasoning sessions in the clinical course, in which experienced veterinary surgeons guide small groups through a range of scenarios across small animal, farm animal and equine species. These sessions require students to discuss, reflect and present their findings to their peers. During year 6, consultations are structured to enable students to have adequate time to take a history, perform a clinical examination and construct a list of problems and differential diagnoses before reviewing these with a veterinary surgeon. During clinical rounds, students lead on presenting their cases, including discussions around management decisions, to peers and supervising veterinary surgeons. Additional small group case discussion sessions are also incorporated into many rotations and provide further time for reflection and learning. On some rotations, such as the farm animal herd/flock health week, most of the week is devoted to small group discussions. Equine and farm animal ambulatory calls provide valuable time for students to discuss cases with clinicians on route to and in-between calls. Students are also encouraged to use quieter periods on rotations to prepare for upcoming cases, for independent research and for discussions with peers and supervising clinical staff. The LOL includes exercises in reflection around clinical case management. This log is subsequently discussed with their VSCS who provides feedback and guidance as required. In their one-to-one feedback at the end of each rotation, students are asked about the workload. Rotation staff are then able to respond to feedback.

Standard 5.4: Medical records for patients seen intra- and extramurally under Core Clinical Training (CCT) must be comprehensive and maintained in an effective retrieval system to efficiently support the teaching and learning, research, and service programmes of the VEE.

The VTH and primary care practice currently use an AT practice management system which provides appointment diaries for all services, records patient and client details, and allows itemized costings for consumables, drugs and procedures as well as stock inventory/control. It has the ability to record patient notes, medical records and other details which are used in conjunction with paper patient files. The AT practice system is now outdated, and we are currently in the process of implementing a cloud based integrated practice management system, ProVet Cloud. This new platform will bring together the information held on the current AT system with imaging, laboratory and computer-based document repository. Online forms will substantially eliminate the

need for physical patient files. This new system has been implemented in other UK Veterinary Schools (including Edinburgh, Liverpool, and Dublin).

We have concluded the data mapping exercises across the existing data resources and are now in the data migration and testing phase. We realistically anticipate achieving 'go-live' within the current academic year (2024-2025). The new platform also has features specifically designed to enable drafting of clinical notes by students, which will not form part of the legal medical records until reviewed and approved by the supervising clinician.

Comments on Area 5
The small group sizes and high staff: student ratios mean that the students receive a large amount of personalised hands-on clinical training within our VTH, particularly in Year 6.

Suggestions for improvement in Area 5
The implementation of the new practice management system will improve efficiency within the VTH. We are hoping that the expansion of our small animal first opinion clinics at the VTH will help to increase the number of exotic animal species seen by the Year 6 students.

Area 6. Learning resources

Standard 6.1: State-of-the-art learning resources must be adequate and available to support veterinary education, research, services and continuing education. Learning resources must be suitable to implement teaching facilities to secure the 'never the first time on a live animal' concept. When the study programme is provided in several tracks/languages, the learning resources must be available in all used languages. Timely access to learning resources, whether through print, electronic media or other means, must be available to students and staff and, when appropriate, to stakeholders. State-of-the-art procedures for bibliographical search and for access to databases and learning resources must be taught to undergraduate students, together with basic English teaching if necessary.

Online Resources
The University moved to the web-based 'Moodle' virtual learning environment (VLE) platform in 2016. This is used for provision of lecture material that is uploaded for student reference. Moodle is available to students both on and off campus and can be accessed via any web browser with secure, password-protected access. Moodle provides learning technology that is being more widely used within the Department, including provision of quizzes and forums. The Department also undertakes lecture capture, and recordings of lectures given in the Department are available via Moodle. These recordings can be searched and reviewed by students at any time. Evaluation of new technology for the teaching program takes place via the Teaching Operations Committee and may involve the formulation of a working party to look at the feasibility of introducing innovations. For students due to graduate in 2027 and 2030, all EMS and VSCS feedback will be housed electronically, accessible on-demand within the E-portfolio (MyProgress).

Library Resources
Students are able to access physical libraries within the West Hub Library, University Library or individual college libraries. See Standard 6.2 for more details.

Clinical Teaching Resources
The learning of clinical skills is delivered in the Pauline Brown Clinical Skills Centre and Merton Hall Farm (see Standard 4.3) in a variety of ways, from basic animal handling and task-based training using bench-top models, to the rehearsal of clinical skills in sequence and through case-based scenarios. These facilities underpin the 'never the first time on a live animal' concept in our curriculum.

Standard 6.2: Staff and students must have full access on site to an academic library administered by a qualified librarian, an Information Technology (IT) unit managed by a qualified IT person, an e-learning platform, and the relevant human and physical resources necessary for the development of instructional materials by the staff and their use by the students. The relevant electronic information, database and other intranet resources must be easily available for students and staff both in the VEE's core facilities via wireless connection (Wi-Fi) and from outside the VEE through a hosted secured connection, e.g. Virtual Private Network (VPN).

The main Clinical Veterinary Medicine library collections are held within the West Hub Library. The West Hub building is located just a minute's walk from the Department and is open from 8am until 9pm Monday to Friday. The West Hub has more than 440 reading places, and caters for a wide variety of learning styles, including independent quiet study, group working options, and

catering facilities. It is the primary source of veterinary information, with the Colleges and UL holding a smaller number of veterinary texts. The West Hub Library has a veterinary subject specialist librarian who is part of the wider Biological Sciences Libraries Team. The library team forms part of the wider Cambridge University Libraries (CUL), and benefits from the expertise and support of this wider group. The library team offers a comprehensive training programme to support students with their studies, including topics such as literature searching and critical evaluation.

IT services
Computing facilities and support for students and staff are provided by University Information Services (UIS). UIS provide IT services for students (https://help.uis.cam.ac.uk/new-starters/get-started-with-it-for-new-students/it-services-students) including free access to Microsoft Office 365, including Word, Excel, PowerPoint, Outlook, OneNote, OneDrive, and Teams, training in use of our Virtual Learning Environment platform (Moodle), and help with accessing the online timetables. Fast wireless internet access for staff and students is provided across the whole University. When working away from the University a range of options, including a VPN, are available for off-site access to other University facilities and information.

Standard 6.3: The VEE must provide students with unimpeded access to learning resources, internet and internal study resources, as well as facilities and equipment for the development of procedural skills (e.g. clinical skills laboratory). The use of these resources must be aligned with the pedagogical environment and learning outcomes within the programme and have mechanisms in place to evaluate the teaching value of changes in learning resources.

The West Hub Library holds the latest editions of all clinical veterinary texts that are listed on the subject reading lists. CUL provides an online catalogue listing books, journals and e-resources. A wide range of e-books are also available via the catalogue. The University's spend on provision of e-books has increased and provision in the veterinary and veterinary-related subject fields continues to increase. The university subscribes to the complete BSAVA online collection, in addition to major e-book collections from Proquest, EBSCO, Springer and Taylor & Francis. Users can request new items for stock (print or electronic) using an online form available from the library website. Access to scientific journals, most of them electronic, can be gained across the University through the catalogue for staff and students. CUL provides an extensive range of electronic journals, supplemented by print journal collections that are held off-site and made available via a scan and deliver service direct to email. A full document supply service is also available, and requests placed via the iDiscover catalogue are usually fulfilled within one working day. Another route of provision of electronic journals and books is through legal deposit at the UL. Many publishers now choose to deposit in electronic format, and the West Hub has a Non-Print Legal Deposit terminal for access to these. The University also provides remote access to a wide range of databases, including Web of Science, Scopus, and PubMed. A veterinary anatomy visualisation tool called Vet-Anatomy (from IMAIOS), is also available. Electronic material is available to all staff and students via a secure password both on and off campus and is accessible 24/7.

Organisation and supervision of clinical skills facilities
The VEE has a team dedicated to the delivery of the teaching of clinical skills, with one veterinary surgeon, two veterinary nurses and two technicians. The team is supported by the Academic Lead for Clinical Skills and three 'Clinical Skills Champions' (in small animals, equine and large animals). In partnership with the Clinical skills team, clinicians teach clinical skills pertaining to their areas of expertise, for example equine clinical examination, small animal surgical skills, and postmortem examinations.

Clinical skills teaching occurs as part of Year 4 and 5 SGCPs. Intended learning outcomes are mapped by TOC and CCRG to EAEVE and RCVS Day One Competences.

Mechanisms are in place to evaluate the teaching value of changes in learning resources
Students submit anonymous feedback on SGCPs via MEQs. Evaluation of clinical skill teaching is also collected from previous students through the graduate survey, and as part of the mandatory RCVS Graduate Development Phase (RCVS GDP). The RCVS GDP survey information also includes an assessment of the graduate's clinical skills by their GDP tutor, so both self-reflected and observer-reflected views on skill ability are collected. SGCP leads have access to current student feedback with which to make changes in response to the feedback.

Comments on Area 6
Comprehensive library and IT resources are available through the University and individual student Colleges. The clinical skills laboratory is well staffed and equipped and has excellent feedback from students.

Suggestions for improvement in Area 6
Further exposure of students in Years 1 and 2 to clinical skills and the clinical skills laboratory will be explored.

Area 7. Student admission, progression and welfare

Standard 7.1: The VEE must consistently apply pre-defined and published regulations covering all phases of the student "life cycle", e.g. student admission, progression and certification. In relation to enrolment, the VEE must provide accurate and complete information regarding the educational programme in all advertisements for prospective national and international students. Formal cooperation with other VEEs must also be clearly advertised.

Information about the course for potential applicants is published on University https://www.undergraduate.study.cam.ac.uk/courses/veterinary-medicine-vetmb) and Departmental websites (https://www.vet.cam.ac.uk/study/vet). These include information about student admissions and course content. Additionally, we advertise our course to prospective applicants through the annual Vetcam residential course and three University open days. We also hold an on-line offer holders' evening event where students can hear from current students, receive a sample lecture and ask questions to students and staff about the course and University.

Standard 7.2: The number of students admitted must be consistent with the resources available at the VEE for staff, buildings, equipment, healthy and diseased animals, and materials of animal origin.

Table 7.2.1. Number of new veterinary students admitted by the VEE

Type of students	2023-24*	2022-23	2021-22	Mean
Standard students	64	62	62	62.6
Full fee students	7	6	4	5.6
Total	71	68	66	68.3

** The last complete academic year prior to the Visitation*

Table 7.2.2. Number of veterinary undergraduate students registered at the VEE**

Year of programme	2023-24	2022-23	2021-22	Mean
First year	71	68	66	68.3
Second year	68	61	79	69.3
Third year	57	72	62	63.7
Fourth year	66	64	68	66.0
Fifth year	61	68	54	61.0
Sixth year	66	53	54	57.7
Total	389	386	383	386

Table 7.2.3. Number of veterinary students graduating annually

Type of students	2023-24	2022-23	2021-22	Mean
Standard students	57	47	48	50.7
Full fee students	3	3	4	3.3
Total	65	50	52	55

Table 7.2.4. Average duration of veterinary studies

Duration	% of the students who graduated in 2024

	(60)
+ 0**	95%
+ 1 year	1%
+ 2 years	2%
+ 3 years or more	0%

Table 7.2.5. Number of postgraduate students registered at the VEE

Programmes	**2023-24**	**2022-23**	**2021-22**	**Mean**
Interns	29	28	31	29.3
Residents	35	30	29	31.3
PhD students New students admitted: *Total:	 10 42	 10 44	 8 39	 9 42
Others MPhil Admitted: *Total:	 2 2	 3 3	 9 9	 5 5

Standard 7.3: The selection and progression criteria must be clearly defined, consistent, and defensible, be free of discrimination or bias, and take into account the fact that students are admitted with a view to their entry to the veterinary profession in due course.
The VEE must regularly review and reflect on the selection processes to ensure they are appropriate for students to complete the programme successfully. If the selection processes are decided by another authority, the latter must regularly receive feedback from the VEE. Adequate training (including periodic refresher training) must be provided for those involved in the selection process to ensure applicants are evaluated fairly and consistently.

Veterinary Medicine admissions are closely aligned with the University's systems for admissions in all subjects. This embeds fairness and equality for applicants throughout the admissions process. We actively contribute to the University's outreach and WP activities, and annually aim to meet our target Access and Participation Plan (APP) goals (*https://www.undergraduate.study.cam.ac.uk/access-and-participation-plans*) We require all staff members involved in admissions to complete rigorous training. This is delivered by the Admissions Subject Convenor in Veterinary Medicine and an experienced admissions staff member. While we adhere to the majority of the University's admissions policies (*https://www.undergraduate.study.cam.ac.uk/apply/after/admissions-policy*, we are required to deviate due to course specifications. These are mainly related to fitness to practice, numbers management, and external accreditation. Details of these Vet Med unique aspects are available in the 'Admissions Staff Handbook' under 'Specific Applicant Types' for Veterinary Medicine (*see Appendix 7.3 Admissions Staff Handbook*).

Admission procedures for standard and full fee students
Selection criteria
All applicants are selected on the same criteria which are focused on (1) academic potential in science and (2) evidence of communication, motivation, interest and self-driven further research when undertaking vocational experience or other scientific/veterinary activities beyond the school curriculum. While we recommend vocational experience, it is not required as this would disadvantage some applicants. To determine the academic potential of all applicants, we require the completion of a standardized test, the Engineering and Science Admissions test (ESAT -

https://www.undergraduate.study.cam.ac.uk/apply/how/science-engineering-admission-test). The scores from this assessment as considered when decisions are made regarding an invitation to interview and final selection. The standard format is two 25-minute interviews, each with at least two interviewers. At least one interviewer will be a veterinary surgeon.

Interviews and final admission decisions are handled by the college that the student selected to apply to. If a student does not select a college, they are allocated to a college according to a central algorithm. All colleges are very similar in their approach to interviews and decision-making. To ensure this, the Admission Subject Convener holds joint meetings and circulates clear criteria for selection and expectations for the interview process. Moreover, many colleges share interviewers and work collaboratively throughout the admissions process.

To achieve equal access to the Cambridge veterinary course, detailed contextual information on all UK candidates regarding their educational and socioeconomic status is considered (e.g. school type, POLAR4, Index of Multiple Deprivation, free school meals, output area classification). Veterinary Medicine applicants can also access the Extenuating Circumstances Scheme (**https://www.undergraduate.study.cam.ac.uk/apply/how/disrupted studies**) allowing their school, social worker or doctor to detail any disadvantages a candidate may have experienced. Applicants are also provided with multiple opportunities during the admissions process to declare disabilities, specific learning difficulties (SpLDs), and caring responsibilities. Admission decisions consider the applicant as a whole, weighing their performance in school, the admissions assessments, interviews, disadvantages, personal circumstances, and more. To ensure fairness, there is an additional opportunity for applicants who were interviewed but did not initially receive an offer to the course. This process involves applicants from all colleges being added to a group "pool" and receiving an offer based on the stated criteria.

Applicants are notified of the outcome of their application in late January. Most have not yet finished school, so offers are made conditional on achieving certain grades in their end-of-school exams. For example, a UK student taking three science/maths A-levels will usually be asked to achieve A*AA grades or 41-42 points at IB.

Exceptional admissions rarely occur. Such cases are considered within each college of the University by an admissions tutor, and across the University by the 'Subject Convenor' in Veterinary Medicine. Examples of these would include:

a. Admission of students who already hold a Bachelors degree. These applicants are assessed on the basis of the content of their degree, or if their degree was not in science, additional science conditions are set – such as attainment of Chemistry and other science A levels. All postgraduate applications are processed by one of three colleges which specialize in mature and postgraduate admissions.
b. Admission of candidates who narrowly miss their academic offer, following careful consideration of educational disadvantage they have encountered.

Consistency in approach for all contextual factors is overseen by the Admissions Subject Convenor in Veterinary Medicine who is appointed by the Veterinary Education Committee. The admissions process is carefully monitored to minimise admission of students unable to complete the course. Every year the University completes a detailed review of the preceding admissions round. Suggestions and concerns are discussed and implemented for the proceeding admissions when collectively agreed upon. In addition, the Admissions Subject Convenor submits a report to the Veterinary Education Committee which includes numerical data, information concerning the

running of the admission process, a review of selection processes and criteria and a discussion of future plans for the number of students admitted.

Policy for training of disabled or ill students
All departments, including Veterinary Medicine, work according to a standard University approach (see *Appendix 7.3 Code of Practice: Access & Inclusion for Disabled Students*).
Information about support for disabled students both applying to, and studying at, the University is publicly available at https://www.undergraduate.study.cam.ac.uk/why-cambridge/support/support-disabled-students and https://www.disability.admin.cam.ac.uk/how-get-support/advice-new-students.

The Department of Veterinary Medicine admissions webpages contain the text, '*a disability, specific learning disability or other health condition need not prevent you from studying with us and becoming a veterinary surgeon if you can satisfy the professional Fitness to Practice requirements. We often find that applicants have previously been dissuaded unnecessarily from enquiring about a veterinary career. However, you should contact a college admissions tutor, or the Director of Teaching at the Department of Veterinary Medicine as early as possible to discuss your needs. The sooner we know about them, the sooner we can put additional measures in place to support you - during the application process, and on the course'.*

During the application process there are multiple points at which applicants are asked whether they wish to declare a disability or specific learning disability (SpLD). At this stage a discussion may be initiated regarding whether the applicant requires any adjustments to be made to the admission process to take account of their disability. In addition, during the selection process, consideration is given to whether an applicant's disability has disadvantaged their education or access to vocational experience or other activities beyond their school curriculum.

From the time they are made a conditional or firm offer, and throughout their time at Cambridge, students are encouraged to register with the University's Accessibility and Disability Services (www.disability.admin.cam.ac.uk). The ADRC will:

a. encourage students to seek all additional support available to them, e.g. funding for particular needs
b. itself provide funding, mentoring and advice, as well as support with study skills, if appropriate
c. often draw up a 'Student Support Document' (SSD) which details a disabled student's needs; this is then (with the student's permission) disseminated to the faculties and departments in which they are taught, as well as their college, which is responsible for their pastoral care, accommodation and small-group teaching in the preclinical phase of the veterinary course.

Appeals process
Applicants to the veterinary medicine course can submit a complaint via the University's admissions complaints process www.undergraduate.study.cam.ac.uk/apply/after/complaints.

Standard 7.4: There must be clear policies and procedures on how applicants with disabilities or illnesses are considered and, if appropriate, accommodated in the programme, taking into account the requirement that all students must be capable of meeting the ESEVT Day One Competences by the time they graduate.

The Accessibility and Disability Resource Centre (ADRC) provides support to students with disabilities and illnesses (www.disability.admin.cam.ac.uk). The ADRC will:

a. encourage students to seek all additional support available to them, e.g. funding for particular needs
b. itself provide funding, mentoring and advice, as well as support with study skills, if appropriate
c. design specific 'Student Support Document' (SSD) which details a disabled student's needs; this is then (with the student's permission) disseminated to the faculties and departments in which they are taught.

Students may also contact the University Occupational Health Service if they have particular physical health conditions including allergies. The Service provides advice on mitigating measures that may be implemented. The Department of Veterinary Medicine Safety Team will provide support for students with allergies, external face fittings and face masks, or any other needs.

Standard 7.5: The basis for decisions on progression (including academic progression and professional fitness to practise) must be explicit and readily available to the students. The VEE 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. The VEE must have mechanisms in place to monitor attrition and progression and be able to respond and amend admission selection criteria (if permitted by national or university law) and student support if required.

Admission Criteria are publicised in the Curriculum handbook, on the Veterinary Sciences Tripos website and on the Department of Veterinary Medicine website for prospective applicants. This shows the entrance requirements for applicants. Information on progression is also found on these sites.

Student progress is monitored closely throughout the course. Each student has a College Director of Studies (DoS), and Tutor appointed for the entirety of the course who are involved in their academic progress and pastoral care (including health and finance) respectively. Students usually have twice termly meetings with their DoS and Tutor to check progress. Each student also has a Veterinary School Clinical Supervisor (VSCS) appointed, with whom they have termly meetings and who gives advice about the profession and placements that students should be attending to make sure they are gaining the necessary extra-mural practical experience and consolidating their practical and professional skills.

In Years 1 and 2, students are involved in interactive, weekly small group teaching sessions (supervisions) for each examination subject (usually in groups of 2-3). From these sessions they receive formative feedback on knowledge, understanding and writing skills. Each supervisor writes a termly report on the student's work and progress which can be seen by the DoS and Tutor and any concerns can be discussed with the student in their meetings. In Years 4-6, students are involved in small group clinical practicals and then rotations in small groups. This allows teaching staff to interact directly with students in a clinical setting and to give feedback, which, although usually formative, by Year 6 becomes summative when there is rotation clinical work that must be performed to a prescribed standard. Ability to progress through the course is monitored both by examination and behaviour.

Across the Vet MB curriculum, a comprehensive and varied examination and assessment system is used to assess students' theoretical, practical and professional skills and competencies. Fulfilling EAEVE and RCVS Day One Competences is a priority but is not the only goal of the Programme.

Graduates are expected to be educated beyond Day One Competence standard, highly motivated with excellent transferable critical skills, equipping them for life-long self-learning. Cambridge examinations for veterinary students lead to the award of two overlapping, but separate, degrees. The professional Cambridge Veterinary Programme leading to award of the Bachelor in Veterinary Medicine (Vet MB degree) and eligibility to be admitted as a Member of the Royal College of Veterinary Surgeons is examined during the first two preclinical years (2nd Vet MB examinations) and the last three clinical years (Final Veterinary Examinations Parts I and II.

Progression in Years 1 and 2
The examination for each subject of VetST 1A and 1B is divided into three sections. Sections I and II are assessed for both the Tripos and the 2nd Vet MB. Section III is assessed for the Tripos only. In some subjects the section I and II papers are combined into a single paper.

- Section I is a theory paper and is assessed either by MCQ or short notes.
- Section II is a practical or data handling paper and is usually assessed by MCQ or short notes.
- Section III is an essay paper.

Progression in Years 4-6
Teaching and learning are examined by two examinations at the end of each of the first 5 terms with the examinations covering all the work of that term, and two examinations in the 6th term assessing practical clinical skills (OSCEs) and an open-book examination assessing the students' understanding of the RCVS Guide to Professional Conduct.

Assessment of the taught courses is of students understanding and knowledge of core material presented in the courses; a proportion of questions explores interpretation of pathological/clinical findings and data in a case-based format. Students are required to pass each subject; one resit attempt is permitted. Classification is on a Merit/Pass/Fail basis. Except for the summative OSCE exams, the Final Veterinary Examinations Part I exams have a multiple choice, computer marked format. The course organisers set questions, which are scrutinised by a member of the panel of internal examiners and by the external examiners.

Successful completion of the Final Veterinary Part II at the end of Year 6 enables registration as a Member of the Royal College of Veterinary Surgeons. The examination consists of four written papers, (Small Animal, Farm Animal, Equine Studies and Veterinary Public Health), practical/oral examinations and assessment of a student-selected period (including a VetMB Research Project). Students must achieve a satisfactory level of performance in all of the final year clinical rotations (continuous assessment) and have completed all EMS placements satisfactorily to be eligible to sit the Final Veterinary Part II examinations. Students also present an e-portfolio of work, including the VetMB Research Project, that each student has accumulated over the duration of the Veterinary Programme, as a further component of the Final Veterinary Examination Part II. The Part II written examination covers all material delivered in the veterinary curriculum.

Advertisement to students and transparency of these criteria/procedures
Information about the Code of Conduct, Fitness to Practise and Examinations is available in the Veterinary Student Handbook. Students receive a short lecture detailing Fitness to Practise and related professionalism concepts in both 4th year, and a professionalism lecture in the 5th year. Students are made aware of their assessment and progression requirements in their course handbooks, on Moodle, on course web pages, via their course organisers and examiners. Marking and classing criteria are available to all students for their relevant exams on course websites. Also available are pass marks from previous years where post hoc analysis is used to calculate these or

specific pass marks for individual examinations. Past papers and exemplar questions are also available, to help students prepare for the type and structure of exam questions.

There is a Medical and Veterinary Student Progress Panel to which some students may be referred in instances of repeated examination failures, and there is remedial support available if necessary; this is organised through Colleges for Years 1-2 and Colleges and Department of Veterinary Medicine in Years 4-6. The specific remediation process is below and is specified for Colleges in *Appendices 7.5 Guidance for Colleges on Student Cases, 7.5 Remedial Support Policy (Preclin 2nd & Final VetMB PI Exams)*, and *7.5 Remedial Support Policy (Final VetMB PII Exam)*.

Attrition of students from the course can be for different reasons:
a. Students whose course or career choices change.
b. Students who leave the course for health reasons.
c. (Cambridge has a successful policy of not losing UK students due to financial reasons.)
d. Students who fail to complete some element(s) of the course.
Attrition due to cause (d) is extremely low in the veterinary course at Cambridge, in fact in the past 10 years no students have left the course due to examination failure. We attribute this to the stringent entry criteria we use, and the excellent pastoral and academic support available to our students. This is a feature of the University as a whole. See sections 7.1-7.3.

Table 7.5.1 Non-academic attrition

Year	2021-22		2022-23		2023-24	
	Reason	Number	Reason	Number	Reason	Number
1						
2	unknown	1				
3	Transfer internal Left with BA(Hons)	1 1	Transfer internal	1		
4			Student deceased Teaching PGCE To do PhD Changed career choice Left but rejoined course later	1 1 1 1 1		
5					Changed career choice	2
6						

When students leave the course, they are asked why but not all reply.

We monitor examination results for attainment gaps of those with student support documents (SSDs). Our numbers are small and power of analysis low, but there is no consistent increase in first attempt fails by those with SSDs in the Final Veterinary Examination Part I or II and there is no difference in the ability to obtain a merit in the examinations for those with SSDs.

Table 7.5.2 Final Veterinary Part I attainment gap analysis:

Fishers exact test 2-tailed p value	Number with SSD /Number without SSD	Number of 1st attempt fails	Number of Merits
Part I 2021-23 cohort	8/54	0.004	0.958
Part I 2022-24 cohort	0/58*	n/a	n/a
Part I 2023-25 cohort to Exam6	16/52	0.454	0.646

*Students with SSDs intermitted and are now in 2023-25 cohort

Table 7.5.3 Final Veterinary Part II attainment gap analysis:

Fishers exact test 2-tailed p value	Number with SSD /Number without SSD	Number of 1st attempt fails	Number of Merits
Part II 2023	7/40	1.000	0.228
Part II 2024	7/59	0.118	1.000

Standard 7.6: Mechanisms for the exclusion of students from the programme for any reason must be explicit. The VEE's policies for managing appeals against decisions, including admissions, academic and progression decisions and exclusion, must be transparent and publicly available.

Suspected cases of academic misconduct during teaching or examinations are regulated by University Cambridge procedures. Following investigation by the Head of Department or nominated representative (usually the Chair of Examiners/Senior Examiner), proven allegations may result in either an Exam Board sanction or the award of a mark of 0 for the affected assessment. More serious offences may be referred to the University's Discipline Committee. Students have the right to an appeal which must be submitted to an Appeal Committee within 10 days of the outcome to impose a sanction. Full details and guidance are available at https://www.plagiarism.admin.cam.ac.uk/investigating/staff-guidance and in *Appendix 7.6 Academic Misconduct Guidance*.

All students undertaking professional courses of study that require them to adhere to higher standards of professional behaviour are subject to the University's Fitness to Practise procedure (*Appendix 7.6 Fitness to Practise Procedure*). Expressions of concern are usually made by the Chair of the Medical and Veterinary Student Progress Panel (responsible for considering issues relating to ill health or any other concern that does not merit a referral to the FTP Committee) or a student's College Senior Tutor (with overall responsibility for students' pastoral care). Investigations into Fitness to Practise concerns are conducted by the Veterinary Medicine Fitness to Practice Panel, as detailed in student handbooks and also on students' relevant web pages (*Appendices 7.6: Student Handbook (Years 1-2)* and *7.6: Student Handbook (Years 4-6)*). The Fitness to Practise process may result in a variety of outcomes, including removal from the student register (and access to professional elements of the course) and that any relevant professional body, regulator and/or the Disclosure and Barring Service be informed of the action.

The appeals process for academic and progression decisions is detailed in examination and University guidance (*Appendix 7.6: Fitness to Practise procedure*) and signposted from the student handbooks (pages (*Appendices 7.6: Student Handbook (Years 1-2)* and *7.6: Student Handbook (Years 4-6)*). Students can appeal FTP decisions through the Student Complaints procedure, as set

out in University rules and regulations (details at https://www.studentcomplaints.admin.cam.ac.uk/reviews-decisions-university-bodies/fitness-practise-appeals and there is a University examination review process in place (see *Appendix 7.6 Examination Review Procedure*).

Where it appears that a student may have breached the rules, the behaviour will be investigated and where a breach of the rules has occurred penalties or sanctions may be imposed as outlined using the Student Disciplinary Procedure (*Appendix 7.6: Student Disciplinary Procedure*) through the University's Office of Student Conduct, Complaints and Appeals (OSCCA). Students involved in disciplinary processes have access to support through their Colleges.

Standard 7.7: Provisions must be made by the VEE to support the physical, emotional and welfare needs of students. This includes but is not limited to learning support and counselling services, career advice, and fair and transparent mechanisms for dealing with student illness, impairment and disability during the programme. This shall include provision for disabled students, consistent with all relevant equality, diversity and/or human rights legislation. There must be effective mechanisms for the resolution of student grievances (e.g. interpersonal conflict or harassment).

Summary
Veterinary students at Cambridge are able to access a wide range of support services covering mental health and wellbeing, physical health, disabilities and neurodiversity, academic progression and financial support. This support is provided jointly between the Colleges, the Central University and the Department of Veterinary Medicine (see *Appendix 7.7 Summary of student support services*). The University has recently implemented a new programme of student support (see Reach-Out), working with Colleges to bring a more consistent and streamlined system of integrated support, including closer links with local NHS providers.

Monitoring of perceived need, accessibility, uptake, and benefit of support is central to the ongoing student support framework. There are two main streams of data: First, University Student Services and the Colleges jointly undertake an annual survey of all students to capture data on these measures relating to counselling and wellbeing support. The most recent report (2022-23 academic year – response rate 11% of all students) is available on request. Second, University Student Services tracks key performance indicators on referral time, demographics, category of presentation, and CORE-10 clinical score against a baseline population after each referral session. A summary of data for the year to September 2023 is available on request.

Standard 7.8: Mechanisms must be in place by which students can convey their needs and wants to the VEE. The VEE must provide students with a mechanism, anonymously if they wish, to offer suggestions, comments and complaints regarding the compliance of the VEE with national and international legislation and the ESEVT Standards.

During the programme, students have many occasions to engage with feedback mechanisms, either in person or anonymously; this feedback is viewed within a rigorous quality assurance process and actions and changes which result from student feedback are communicated to them at regular intervals. As outlined in Standard 1.4 students are provided with anonymised surveys to gather feedback at both the unit of study level and programme level that are bespoke to the Department of Veterinary Medicine.

In addition the Department has established an online Anonymous Accreditation Compliance Form that allows students to make any suggestions, comments or complaints about the compliance of the Department with regard the standards for accreditation (RCVS and/or ESEVT) and/or that the Day One Competences (RCVS and/or ECCVT) are not being met by the programme. Student responses are considered by the Teaching Operations Committee (TOC) to cascade to whomever is most appropriate to deal with the issue(s) raised. All responses received via this form remain anonymous, however a student can include their name and contact details on the form if they wish to receive a direct response sent on behalf of TOC. A similar anonymous online form is also made available to all staff.

Comments on Area 7

Our attrition rate is very low which likely reflects the pastoral and academic support available within the University.

Suggestions for improvement in Area 7

There remains a challenge with recruitment of students from underrepresented backgrounds, and future strategies to address this could include subsidised attendance at residential open days/events such as the annual Vetcam residential course. The mechanisms for student feedback across Years 1-6 are not currently standardised, and this is something that we wish to explore in future.

Area 8. Student assessment

Standard 8.1: The VEE must ensure that there is a clearly identified structure within the VEE 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.

There are three strands to the assessment strategy that run throughout the 6 years of the course. The first is assessment of knowledge acquisition, interpretation and application through written examinations that include multiple choice questions, short answer questions and long answer questions. These start from year 1 and continue into year 6 ensuring a variety of modes of assessment throughout the course. Within the first 2 years of the programme where theoretical knowledge lays the foundation for the following years, there is emphasis on knowledge and simple interpretation questions with increased emphasis on clinical reasoning questions in the clinical years (4-6). In Year 6 the final written examinations are composed of short answer, clinical reasoning/clinical practice questions. In both the 3rd and 6th year of the course, students write longer reports and give oral presentations from research projects or a dissertation. This allows the students to demonstrate their ability to critically analyse data, and to synthesise hypotheses and conclusions.

The second strand is assessment of practical skill acquisition. There is animal handling teaching and assessment in Year 1 to allow students to work safely on their animal husbandry extramural studies (AHEMS) in the preclinical years. Then, in 4th year, to match the increased clinical practical teaching, there is a formative objective structured clinical examination (OSCE) circuit enabling initial assessment and feedback of clinical and communication skills. A summative OSCE circuit is performed in Year 5 where students demonstrate they have the clinical practical and communication skills necessary to move into the final year rotations. Throughout the final year, students are assessed on clinical skills in rotations, where they must take part in directly observed procedural skills (DOPS) as well as the demonstration of other skills such as teamwork within a clinical team, communication, and more advanced clinical skills. All rotations must be passed to proceed to the final written examination at the end of the year. The third strand of assessment is reflective learning practice around professional skill acquisition in the e-Portfolio. This starts in first year with the students setting their own aims and objectives for learning when on EMS, guided by members of staff, and culminates in reflection of learning from cases that have been seen whilst on rotations, including reflection on relevant clinical and communication skills. This develops and promotes self-learning, self-appraisal and self-confidence for the future graduate. It improves awareness of communication ability, how to deal with stress or criticism and how to become more resilient. See section 8.5.

When compared to Bloom's taxonomy, the three strands integrate to have a greater focus on assessment of knowledge and comprehension in the early years of the course, gradually bringing in application and analysis in Years 4 and 5 and then synthesis and evaluation by Year 6 (see *Appendix 8.1 Assessment Review Group 2019 Report*). This also maps to Miller's pyramid as suggested by Baillie and Rhind (2018) (*Vet Record doi: 10.1136/vr.k4381*) and shown in their figure 2 where the higher order cognitive and psychomotor functions are in the higher levels of the pyramid. Teaching and assessment build towards this during the course.

The assessments within the Clinical and Professional phase of the Veterinary Medicine Programme were reviewed and changed by the Assessment Implementation Sub-Group of the Faculty Board of

Veterinary Medicine in 2018-19. From this review, the Faculty Board agreed to a more varied assessment strategy which addresses the higher levels of Bloom's taxonomy and development of practical skill assessment. These changes were introduced in 2021 for Year 4 after consultation with the University Education Quality and Policy Office (EQPO) and current students. This enabled change to the advertised assessment strategy for current students to be agreed and implemented. The Years 4-6 curriculum was changed to align with the new assessment structure. After review of the Veterinary Programme Committee structure in 2024, the Veterinary Education Committee now has oversight of all assessments in the Veterinary Programme. As part of this, a Clinical Assessment Review Group has been set up to report to the Veterinary Education Committee. This Group will review how the assessments implemented in 2021 are performing and if changes should be made. The group will also review the use of different methods of standard setting for these assessments. (*Appendix 8.1 Assessment Review Group 2019 Report*).

Standard 8.2: The assessment tasks and grading criteria for each unit of study in the programme must be published, applied consistently, clearly identified and available to students in a timely manner well in advance of the assessment. Requirements to pass must be explicit. The VEE must properly document the results of assessment and provide the students with timely feedback on their assessments. Mechanisms for students to appeal against assessment outcomes must be explicit.

All assessments are published to students and staff through the use of Moodle for specific courses and, additionally, timetables and University Policies are available on the Cambridge Students Exams SharePoint site. The timing of written examinations is decided in conjunction with the University Examinations Office, and it is they who arrange the venue and supervise the running of written examinations. All these examinations are run under the University policy on examinations which is reviewed yearly and is available from the Exams SharePoint site (See *Appendix 8.2 Student Guide to Examinations 2024-25*). The VEE's written examinations are run online, using an electronic examination platform but are invigilated and in person. Examination formats are given in writing to students through Moodle and the Marking and Classing criteria are also available to them describing the pass marks or how the pass mark will be calculated (see *Appendix 8.2 Marking & Classing Criteria and Policy*).

We appoint External Examiners from other academic institutes to approve examination papers and to take part in the final review of marks before publication to students. They 'audit' the process to check that marking and grade boundaries have been correctly applied. Results are published through CamSIS into the individual student record. This can be seen by the DoS, Tutor and VSCS of the student as well as Senior Tutor and Tutorial Offices of their College and the Department of Veterinary Medicine. For clinical competence assessments, feedback forms are given to students and their VSCS (see *Appendix 8.2 Post Assessment Student Feedback Example*). The DoS and Tutor will discuss results with the student and also advise on how to improve results where required.

Appeals of examination results are made through the student's College with the advice of the DoS, Tutor and Senior Tutor to the University Examination and Access Mitigation Committee (EAMC) and the Faculty Board of Veterinary Medicine (see 7.5a Guidance for Colleges on Student Cases and below). The programme specific appeal process is found in the course Moodle sites: Clinical Phase and Professional Phase.

The University Examinations Office oversees the examination procedure and marking and classing criteria documents. In Years 1 and 2, students must pass the 2nd VetMB component of the exams

using subject specific pass marks (45-60 % pass). These are available to students on the Faculty of Biology VST Examination website (see *Appendix 8.2 2nd VetMB Pass Marks*). The overall Tripos examination must be passed according to the marking and classing criteria and marking guide. If they fail the 2nd Vet MB component, students are allowed one resit. If they fail the Tripos section, if there are mitigating circumstances, they may apply to the EAMC to progress.. The students must have an Honours degree to enter Year 4 of the course and so must pass the BA(Hon) Part II section of the course in Year 3.

Within Years 4-6 if a student fails a Final Veterinary Examination Part I or II examination, their DoS is informed. For clinical skills assessments (OSCEs), DoS' and VSCS' are informed if a student has failed, or they are notified of a cause for concern if a student is within 5% of the pass mark and a feedback form provided (see *Appendix 8.2 Post Assessment Student Feedback Example*). This allows immediate discussion with the student of ways in which to practise or find remedial support. The clinical skills centre personnel will also talk to the students and put in place remedial support with the support of clinical staff. In Year 6 when on clinical rotations, students are given formative feedback so they can improve before the final summative feedback of the rotation. They may also take DOPS as many times as required to pass and so can use these for formative feedback of skills as well as summative proof of skill acquisition.

Students are given an overview of the assessment programme and when the assessments are given. This information is posted on our virtual learning environment.

Examination Review procedure
The University has robust marking and examination policies in place to ensure that all examination results are accurate. However, candidates may believe that there has been an issue with their final published results and would like them reviewed, to ensure the appropriate marks and class have been awarded. Essays or pieces of work which are submitted for feedback and the development of learning but do not produce marks that count towards their final award, and any provisional marks, cannot be reviewed using the **Examination Review Procedure**.

Standard 8.3: The VEE must have a process in place to review assessment outcomes, to change assessment strategies and to ensure the accuracy of the procedures when required. Programme learning outcomes covering the full range of professional knowledge, skills, competences and attributes must form the basis for assessment design and underpin decisions on progression.

The assessments across the entire Veterinary Programme are presently under review. The Year 1 and 2 assessments are part of the wider Curriculum Review of the VST course. These assessments are being reviewed to ensure they optimise assessment of the relevant domains.

Academic year 2024-25 is the fourth year of the Year 4-6 assessments that were implemented in 2021, after the Assessment Review group report (see *Appendix 8.2 Marking & Classing Criteria*). The Veterinary Education Committee Assessment Review sub-group will audit these assessments to ensure examination at the required cognitive and psychomotor skill acquisition level. Data that has been collected on the assessments will be used to determine standard setting of the examinations and whether further modes of standard setting should be implemented. The mapping of the assessments to the curriculum intended learning outcomes will be checked and the coverage of the EAEVE and RCVS Day 1 Competences assured. Mapping of assessments to teaching sessions, intended learning outcomes and coverage of EAEVE and RCVS Day 1 Competences is well-established.

Any proposed changes to the assessment structure need to be approved by the Faculty Boards of Biology and Veterinary Medicine for Years 1 and 2 assessments and the Faculty Board of Veterinary Medicine for Year 4-6 assessments. Once approved the schedule of changes are sent to the University Examination Office who scrutinise and advise on timelines for implementation that are legal, (due to previously publicised course structures and assessments) and changes to the University Ordinances for the Veterinary Degrees that will be obtained. Changes are included in Course Programme advertising for future applicants as well as being embedded in course regulations through Ordinance and on information sites on Moodle and websites.

Teaching sessions and intended learning outcomes are mapped to Day 1 Competences and assessments are blueprinted to teaching sessions and intended learning outcomes. Additionally, assessments are mapped to Day 1 Competences independently to check that all are being appropriately assessed.

Standard 8.4: Assessment strategies must allow the VEE to certify student achievement of learning objectives at the level of the programme and individual units of study. The VEE must ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process and that the assessment of students reflects this approach.

Assessments are either at the end of courses (Years 1 and 2) or at the end of terms (Years 4 and 5) to ensure students reinforce and maintain learning and progress. They provide an opportunity for students to gauge how well they are performing as they progress through the course. Students are notified of written examination results through CamSIS, and this is also used to notify them of summative OSCE circuit results. Other assessments including animal handling assessments in first year or DOPS and rotation passes are now lodged on MyProgress, the platform that is being rolled out for the e-Portfolio. As the assessments are criterion referenced for progression within the Veterinary Programme, a pass certifies that a student has the appropriate level of knowledge, ability to apply that knowledge and/or skill for the competences being assessed. Within the e-Portfolio are elements that allow students to set their own objectives and learning outcomes for EMS and then reflect on this going forward in order to ensure student-led outcomes-based assessments of professional progress.

Standard 8.5: Methods of formative and summative assessment must be valid and reliable and comprise a variety of approaches. Direct assessment of the acquisition of clinical skills and Day One Competences (some of which may be on simulated patients) must form a significant component of the overall process of assessment. It must also include the regular quality control of the student logbooks, with a clear distinction between what is completed under the supervision of teaching staff (Core Clinical Training (CCT)) or under the supervision of a qualified person (EPT). The clear distinction between CCT and EPT ensures that all clinical procedures, practical and hands-on training planned in the study programme have been fully completed by each individual student. The provided training and the global assessment strategy must provide evidence that only students who are Day One Competent are able to graduate.

The professionalism portfolio (E-portfolio)
The portfolio is active, with the graduation year 2025 having their portfolios summatively assessed as part of their final VetMB exams. Years 1-5 are contributing pieces to their portfolios. For the 2025 graduates, the portfolio is a collection of documents collated as evidence of students' clinical

and professional skills held within Moodle. The transition of the portfolio to a specifically designed electronic environment (MyProgress) has occurred for graduates of 2027 and 2030. The MyProgress software has the intended purpose of enabling students, Veterinary School Clinical Supervisors and assessors to better visualise student progress in a longitudinal manner. Whole school roll out is planned for September 2025.

Integration and alignment with other assessments
Assessment rationale
The portfolio brings together components ('assets') of the Cambridge course into a learning journey, and when combined together, the portfolio provides a meta-view on the development of clinical and professional skills of a student over time and through increasingly complex tasks/scenarios. Many of the assets within the portfolio were pre-existing and were assessed in the Cambridge course, however these were generally assessed as gateways to course progression in addition to the written examinations. Often assessments involved light touch discussions with veterinary school staff to ensure appropriateness of responses/content. Use of the E-portfolio allows greater standardisation of marking of assets including the introduction of defined marking criteria for some of the pre-existing pieces. Whilst in some cases these assets continue to perform as a gateway to progression (i.e. students must show a certain level of proficiency to progress in the course), having the ability to log candidate progression in the E-portfolio is key to assessing their wider professional attributes than assessment via factual learning, interpretation and application of knowledge, which was historically the sole way in which Cambridge has previously assessed the Veterinary course.

The portfolio has been designed to formally evidence the production and assessment of these assets. The assets contribute evidence that maps to many of the desired outcome standards of the degree course. The portfolio also increases the visibility of summative feedback to students, for the purposes of their own reflection and learning. In addition to improvements to the delivery, assessment and reflection upon pre-existing assets, the portfolio is also being used to scaffold new reflective pieces, better facilitating the development of reflective practitioner themes within the curriculum.

Clinical skills assessment
At Cambridge, assessment of clinical skill development by students occurs through the E-portfolio utilising a variety of different assessment methods. Some of the clinical skills assessments occur at defined time points, whilst others allow students to choose when to be examined for those skills.

Defined time-point assessments are also used as gateways to progression in the course and ensure students are reaching mandatory standards in certain clinical skills by certain points in the course. The OSCE assessments (assessed by CCT), for both large and small animal, are formative in Year 4 and summative in Year 5 [E-portfolio assets 4.3, 5.2 (see *Appendix 8.5 E-Portfolio Assets*)]. Students must satisfactorily pass all final year rotations, evidenced by the rotation assessment and feedback forms [assessed by CCT; E-portfolio assets 6.4 & 6.5] to undertake their Final Veterinary Examination Part II.

Our OSCEs are designed to assess two tasks in one station. Each circuit consists of four 'hybrid' stations (8 tasks) and students complete both circuits in their assessment day. 16 tasks will be completed by the end of their assessment. There are three hybrid stations which include live animals, clinical examination (CE) skills and communication (CO) skills. These stations assess each core species; canine, equine, bovine or ovine. There is one canine communication and clinical exam station in the small animal (SA) circuit with one equine and one bovine or ovine in

the equine (EQ)/ farm animal (FA) circuit. The rest of the hybrid stations are made up of procedural skills (PS). These stations assess tasks relating to each core species; canine, feline, equine, bovine or ovine. There are three small animal procedural skills stations in the SA circuit with one equine and one farm animal procedural skills station in the equine (EQ)/ farm animal (FA) circuit. The passing criteria are determined post hoc, so assessors (CCT) are not biased to which steps/marks constitute a pass or fail. The pass mark for each task, the overall pass mark and the overall passing station minima are determined by the Internal examiner (IE) and the Head of Assessment using border line regression post hoc. Students must achieve the overall pass mark, the passing station minima and pass one communication and one clinical examination task to pass the OSCE circuit (see *Appendix 8.2 Marking & Classing Criteria and Policy*). All assessors read an OSCE assessor handbook and attend a training session prior to being involved in OSCE marking. Assessors log any conflicts of interests with students to be assessed and are made aware of students with reasonable adjustments.

DOPS

Building upon the contextual assessment of clinical skills through OSCE assessments within Years 4 and 5, Directly Observed Practical Skills (DOPS) have been introduced to Year 6 to facilitate assessment of clinical skills within a real clinical context [E-portfolio asset 6.5 (see *Appendix 8.5 E-Portfolio Assets*)]. Directly Observed Procedural Skills (DOPS) are utilised as formative assessments to determine competency in clinical skills or techniques of final year students in a practical setting, with good reliability and a high perceived validity. Assessors are appropriately trained members of staff (CCT) used to working in the clinical setting and provide immediate verbal and written feedback. DOPS are constructively aligned with OSCEs, designed to test skills in a real-world setting. Students are expected to complete a total of 15 DOPS during the final year rotations. 10 are compulsory and the remaining five must be chosen from each of five clinical groups, anaesthesia, farm animal, equine, small animal medicine and small animal surgery. DOPS for Pathology and Cardiology are currently assessed as part of Farm Animal and Small Animal Medicine respectively. Students can repeat the skill following further training and support, if they score below expectations.

In Years 1 and 2, assessment of animal handling and husbandry practical skills, together with a development of a holistic understanding of animal-related industries is based upon demonstration of engagement with an online husbandry course [E-portfolio asset 1.1], animal handling assessments (CCT) [E-portfolio asset 1.2] and written reports analysing management, animal welfare and business aspects of AHEMS placements [E-portfolio asset 1.3].

The skill of contextual application of Veterinary Public Health knowledge has been assessed through a written report describing two post-mortem meat hygiene specimens, the VPH legal standards specifically relating to those specimens, and the veterinary advice that should be reported back to the farmer [E-portfolio asset 4.4].

These assessment streams are supported by termly one-to-one meetings between each student and their Veterinary School Clinical Supervisor (VSCS) where student progression in knowledge, clinical and professional skill development are discussed. Any cause for concern feedback, whether internal or external also results in an additional meeting between the student and VSCS to understand any issues and to explore routes to resolving specific skill gaps. All VSCSs are qualified veterinary surgeons, and this ensures students receive appropriate advice on their professional development. These meetings occur throughout the entire course resulting in a student receiving 18 or more one-to-one meetings over the duration of the course focused on the students' personal clinical and professional skills development.

Supporting clinical skills by reflective practice

These practical assessments of clinical skills are also supported by structured reflective practice focused on the development of professional practical and cognitive skills. In the last 10 years, Cambridge's strategy for the guided development of clinical skills and their assessment has expanded to formally include professional skills and the holistic application of both clinical and professional skills within applied veterinary practice environments or scenarios. Specific examples of the educational rationale behind both the original asset development and the rationale behind its inclusion within the portfolio is discussed below.

EMS aims and objective forms [E-portfolio asset 4.6]

Student-led Aims and Objective forms for EMS placements have been in place since 2016 for all clinical placements. For 2030 graduates, these are now also required for AHEMS placements. In the Aims and Objectives forms, students set their own Intended Learning Outcomes for an EMS placement (although not specifically referred to as ILOs, they are 'aims and objectives') and the student's VSCS gives feedback prior to the placement starting. The student discusses the form with their placement supervisor at the start of the EMS placement to help guide the EMS providers support to the student. After the placement, the student reflects on whether those ILOs were met, and what learning they experienced. VSCSs then give feedback on these post-placement reflections. The aims and objectives forms act as a personal account of learning whilst on EMS, but furthermore, through the process of planning and analysing clinical and professional skill development scaffolded by their VSCSs, students practice appropriate goal setting, planning of professional development, professional self-awareness and self-audit. Inclusion of this task within the E-portfolio, when appropriately supported by appropriate software, will facilitate personalised form reminders for students regarding the timely completion of these forms and it will facilitate the recording of individual feedback.

Learning opportunities log [E-portfolio asset 6.1]

Final year students are required to log specific learning scenarios from their in-house clinical rotations (five learning opportunities per week). This encourages students to review their learning independently and instigates the habit of regular reflection as a daily process in professional skills development.

4th year EMS communication reflective pieces [E-portfolio asset 4.2]

Year 4 and 5 students receive small group seminar training, including role play, in communication skills. To build on these experiences and encourage students to actively appraise communication skills of other professionals whilst on EMS through the year 4 EMS communication reflective exercises. Year 5 students tackle more challenging communication scenarios in their next set of small group seminars in communication skills, such as angry client and breaking bad news. This scheduling ensures the reflective communication exercise feels relevant to students as they can implement learning generated from the reflective exercises in the subsequent training, and it also develops the students' analytical skills in reflecting on communication.

In the portfolio, this task is located within the reflective practitioner theme, which in the portfolio for 2025 graduates includes three specific reflective pieces [E-portfolio assets 4.2, 5.1, 6.2]. These pieces formally develop and assess the students' reflective ability across Years 4-6. Alongside this pre-existing piece, the implementation of the portfolio has instigated the development of Year 5 and 6 reflective pieces, resulting in a spiral curriculum where students can appreciate the applications and nuances of reflective writing through related but different examples and tasks. The Year 5 and 6 reflective essays [E-portfolio asset 5.1, 6.2] focus on self-reflection and self-

awareness, and they are designed to show self-awareness of learning and limitations during both intra and extramural placements. The reflective practitioner curriculum is an area of expansion within the overarching course curriculum, and also incorporates the re-development of the Year 2 Preparing for Veterinary Practice course. Individual tasks have been developed over the last few years ready for inclusion within the E-portfolio expressly to evidence specific graduate outcome competencies. These tasks include smaller self-contained tasks such as writing a prescription, generating a treatment estimate, and completing equality and diversity and GDPR online training courses [E-portfolio assets 5.4, 5.5, 5.6].

E-portfolio assessment

Many individual e-portfolio assessments are based on pass-fail to a minimum standard/completion of the task [E-portfolio assets 1.1, 1.2, 4.1, 4.5, 5.4, 5.5, 6.1] (see *Appendix 8.5 E-Portfolio Assets*). The standards have been centrally determined by the curriculum committees in the Department of Veterinary Medicine (Teaching Operations Committee), or in the case of standardised online University courses, by the central University e.g. for Data protection. Many assessments also include summative oral or written feedback in addition to the grading. The abattoir report and pharmacy and prescribing exercise have individual rubrics/mark schemes. Whilst the tasks are graded for the benefit of student's learning, the E-portfolio does not record the individual grade, but again records reaching of a satisfactory level. Shorter reflective tasks, from 2024-25 are graded with a simple rubric aligned with unsatisfactory/satisfactory/advanced-type assessment, which includes detailed descriptors to support markers. Markers (VSCSs (CCT)) involved in these assessments have received training in expected standards and meet termly to share experiences [E-portfolio assets 1.3, 4.2, 4.6]. For extended written elements [E-portfolio assets 5.1 and 6.2] within the E-portfolio the following marking approach is applied. A detailed rubric is used that has extensive written descriptors of the different assessment levels. 10 - 20 % of reflective essays in 5th and 6th year, contributing to the final grade of the E-portfolio, are to be double marked. Should marks for a script vary one classification boundary, they shall be averaged. If they vary by more than one classification boundary (i.e. developing, competent, advanced) the internal examiner or chair of examiners will mediate with the markers until an agreed mark is finalised for the script(s). This may require the mark scheme to be modified. All fail written elements from 3. to be double marked. A further 10 % of written elements in the E-portfolio to be checked by the E-portfolio team including the internal examiner to ensure mark schemes are being applied correctly by assessors (CCT). Remedial training of assessors to be given if this is identified.

Comments on Area 8

The introduction of OSCE assessments has improved reliability in our assessment of clinical skills however are resource intense for staff.

Suggestions for improvement in Area 8

Standard setting of the examinations is not yet in place across the curriculum, and we expect to implement this for assessments in the near future.

Area 9. Teaching and support staff

Standard 9.1: The VEE must ensure that all staff are appropriately qualified and prepared for their roles, in agreement with national and EU regulations and must apply fair and transparent processes for the recruitment and development of staff. A formal quality-assured programme of teacher training[1] (including good teaching and evaluation practices, learning and e-learning resources, use of digital tools education, biosecurity and QA procedures) must be in place for all staff involved with teaching. Such training must be mandatory for all newly appointed teaching staff and encouraged on a regular basis for all teaching staff. Most teaching staff (calculated as FTE) involved in core veterinary training must be veterinarians. It is expected that more than 2/3 of the instruction that the students receive, as determined by student teaching hours, is delivered by qualified veterinarians.

The Department and University provide several opportunities for staff to update their skills in teaching and assessment (see also 9.3); it is important that teaching staff remain up to date in their teaching practises. Teaching staff are actively encouraged to participate in one or more of the following quality assured teacher training courses, and participation in the IFME programme is now mandatory for all new clinical teaching staff (including new senior clinical training scholars).

Integrated Foundations of Medical Education (IFME) Programme
This part-time course is run by the Clinical School alongside staff from the Department of Veterinary Medicine and has a focus on small group teaching in the clinical setting. It is available to all staff and Senior Clinical Training Scholars in the Department; the Department pays the course fees, and most staff/Scholars have completed this course. The Department currently has allocated 22 places on the Course per annum, with priority given to new Teaching Staff and first year SCTSs. The course runs from September-June each year.
https://www.medschl.cam.ac.uk/education/integrated-foundations-of-medical-education-ifme-programme/

The IFME programme consists of two compulsory half-day sessions (one in Michaelmas, the other in Lent) and attendance at a minimum of 2 of the 3 additional two-hour sessions. Attendees complete a written assignment, maintain a reflective log and participate in peer observation of teaching. The course is accredited by the Higher Education Academy and successful completion of the course and assessments leads to the award of Associate Fellowship of HEA. The course modules cover: principles of medical education, teaching clinical examination, teaching principles of clinical reasoning, teaching in small groups, principles of feedback and reflective learning.

Advancing Educational Practice Programme (AEPP)
This explores theories of learning, develop a personal philosophy of teaching and learning, and approaches to curriculum design, feedback and assessment. Full details can be found in the Programme Handbook. AEPP is accredited by Advance HE at Descriptor 2; successful completion of the programme will confer Fellowship of the Higher Education Academy. AEPP is designed for Cambridge colleagues with substantive teaching and learning support responsibilities.

Postgraduate Certificate in Teaching and Learning in Higher Education (PGCTLHE)
This is a 12-month Master's-level course, now accredited by Advance HE at D2 (FHEA), open to Cambridge teaching staff with a minimum of three years' experience of teaching in higher education. PGCTLHE is equivalent to **60 credits at FHEQ Level 7** and is accredited by Advance

HE at Descriptor 2 (**Fellow of the Higher Education Academy**; FHEA). For further information on PGCTLHE see: https://www.cctl.cam.ac.uk/pgctlhe

An Introduction to Undergraduate Supervision - This workshop is for anyone new to supervising undergraduates at Cambridge or for anyone who would like to revisit the fundamentals of effective supervisions. If you are a postgraduate student planning to supervise undergraduates, it is mandatory for you to attend this workshop. For more information see: https://www.educ.cam.ac.uk/courses/ppd/courses/assessment/

Post-graduate Certificates in Education
At the current time, three Post-graduate Certificates are available in the University, all at Masters level. The PGCert (MedEd) is fully funded by the University for staff. Other courses incur a fee, with a small staff discount available.

Standard 9.2: The total number, qualifications and skills of all staff involved with the study programme, including teaching, technical, administrative and support staff, must be sufficient and appropriate to deliver the study programme and fulfil the VEE's mission. A procedure must be in place to assess if the staff involved with teaching display competence and effective teaching skills in all relevant aspects of the curriculum that they teach, regardless of whether they are full or part-time, teaching or support staff, senior or junior, permanent or temporary, teachers. Guidelines for the minimum training to teach and to assess are provided in Annex 6, Standard 9.1.

Table 9.2.1 Teaching staff involved with the core veterinary programme**

Type of contract	2023-24*	2022-23	2021-22	Mean
Academic Staff (FTE)	80	84	89	84
Interns (FTE)	16	14	16	15
Residents (FTE)	28	24	23	25
PhD students (FTE)	N/A	N/A	N/A	N/A
Certified specialists (FTE) **included in academic staff above**	33	32	34	33
Practitioners (FTE)	0	0	0	0
Others (specify) FTE	76	71	58	68
Total (FTE)	156	155	147	153

** The last complete academic year prior to the Visitation*
*** All staff included in this table must be contracted by the VEE and have received a training to teach and to assess undergraduate students. Qualified persons/practitioners involved with EPT are not included in this table.*

Table 9.2.2 Percentage (%) of veterinarians in teaching staff

Type of contract	2023-24*	2022-23	2021-22	Mean
Permanent (FTE)	42%	44%	47%	44%
Temporary (FTE)	28%	25%	27%	27%
Total percentage	70%	69%	74%	71%

Table 9.2.3 Support staff of the veterinary programme

Type of contract	2023-24*	2022-23	2021-22	Mean
Permanent (FTE)	59	53	46	53
Temporary (FTE)	0	0	0	0
Total (FTE)	59	53	46	53

Table 9.2.4 Research staff of the VEE

Type of contract	2023-24*	2022-23	2021-22	Mean
Permanent (FTE)	70	72	67	70
Temporary (FTE)	0	0	0	0
Total (FTE)	70	72	67	70

Standard 9.3: Staff must be given opportunities to develop and extend their teaching and assessment knowledge and must be encouraged to improve their skills. Opportunities for didactic and pedagogic training and specialisation must be available. The VEE must clearly define systems of reward for teaching excellence in operation.
Teaching positions must offer the security and benefits necessary to maintain the stability, continuity, and competence of the teaching staff. Teaching staff must have a balanced workload of teaching, research and service depending on their role. They must have reasonable opportunities and resources for participation in scholarly activities.

Staff Training in Teaching: overview
In addition to the teacher training opportunities outlined in Standard 9.1, the Department and University provide several opportunities for staff to refresh and gain skills in teaching and assessment; it is important that teaching staff remain up to date in their teaching practises. For RCVS purposes, these training courses/training days can be counted towards CPD requirements.

Training opportunities available in the Department
*1. **Department Staff Training Mornings***
These are open to all staff and Training Scholars, and everyone is encouraged to attend. They are held on a Friday morning twice per year (once in Michaelmas Term and once in Lent Term) and are delivered by external and internal providers. The topics in each session relate to aspects of teaching and assessment of the Final VetMB course and current issues. Materials from previous training sessions are available on the Information for Teaching Staff Moodle course. The topics covered in recent years are given in *Appendix 9.1 Topics covered at Staff Teaching Training Mornings*.

2. Oral Examination training
This is provided within the Department and relates particularly to the oral examination (*viva voce*) component of the Final VetMB Examinations Part II. Staff participating in those oral examinations MUST have attended a training session and *normally act initially as an observer in the actual exams in June/September to gain experience*

3. University Teaching Forum
This is an annual University-wide, one-day event held in the Easter vacation that aims to aims to bring together staff across the University to discuss all aspects of education and to promote and share innovative ideas and good teaching practice. The event is organised by the Cambridge

Centre for Teaching and Learning (CCTL). Further details can be found at https://www.cctl.cam.ac.uk/events.

4. PPD short courses

Personal and Professional Development (PPD) runs various sessions (online or in-person) through the year. Details of what is available each term are given in the PPD Calendar and can be found at: www.ppd.admin.cam.ac.uk and bookings can be made via this website. In addition, PPD offers online training for leaders and managers that includes giving feedback and managing challenging conversations. The PPD service also proves an online Equality and Diversity course; this is compulsory for all staff.

All staff and Training Scholars providing feedback to final year students on rotations must also complete the online course in giving and receiving effective feedback.

Teaching positions must offer the security and benefits necessary to maintain the stability, continuity, and competence of the teaching staff. Teaching staff must have a balanced workload of teaching, research and service depending on their role. They must have reasonable opportunities and resources for participation in scholarly activities.

Mentoring and Support

We offer a mentoring and support system to foster staff development and ensure a supportive working environment. Our approach to mentoring is both proactive and responsive. For new staff, we provide proactive mentoring to facilitate smooth integration into the department. Each new staff member is paired with an experienced mentor who provides guidance, shares insights, and offers support as they navigate their new role. The proactive mentoring approach also incorporates self-match mentoring for our professional services colleagues, with plans to extend this to other staff groups in the near future.

In addition to proactive mentoring, we offer responsive mentoring and support tailored to specific needs identified through appraisals or other means. This responsive approach ensures that staff receive timely and appropriate support when challenges or development needs arise. Whether it is professional advice, skill enhancement, or personal development, our mentoring and support initiatives aim to empower staff, promote continuous learning, and enhance overall job satisfaction. This dual approach helps us maintain a motivated and competent workforce aligned with the department's goals and values.

Appraisal

Our appraisal process is a structured and continuous cycle designed to support staff development and performance enhancement. Clinical, teaching and support staff are appraised annually by their direct supervisors or line managers, Research staff are appraised bi-annually by their line manager or an appointed appraiser drawn from amongst the senior academic staff of the Department. The appraisal process involves a comprehensive review of the employee's performance over the period, using a standardised format that includes self-assessment, supervisor evaluation, and the setting of future goals.

The focus of the appraisal is to evaluate achievements, identify areas for improvement, align individual goals with the department's strategic objectives, consider development needs and opportunities, and (for research staff) focussing on the development of their research portfolio and networks. The outcomes of the appraisal process are crucial in guiding staff support and development activities. Appraisals are used to tailor professional development plans, inform

training and educational opportunities, and support the promotions process. This ensures that each staff member receives the necessary resources and guidance to achieve their full potential and contribute effectively to the department operations.

Academic Staff Development
A comprehensive overview of the programme of training and development offered to teaching staff is outlined above, all of which is supported and referred to from within the information shared with all teaching staff and updated annually (see *9.4 Teaching Guide 2023-24*). For clinical staff there is guidance over time allocation for clinical service duties versus protected time for personal development (see *Appendix 9.3 Clinical Staff Time Allocation Document March 2024*). Staff in the Department also benefit from access to a programme of researcher development activity managed through the University's Postdoc Academy (https://www.postdocacademy.cam.ac.uk/researcher-development), primarily aimed at early career staff, and other bespoke opportunities offered through specialist departments across the institution.

Standard 9.4: The VEE must provide evidence that it utilises a well-defined, comprehensive and publicised programme for the professional growth and development of teaching and support staff, including formal appraisal and informal mentoring procedures.
Staff must have the opportunity to contribute to the VEE's direction and decision-making processes. Promotion criteria for teaching and support staff must be clear and explicit. Promotions for teaching staff must recognise excellence in and (if permitted by the national or university law) place equal emphasis on all aspects of teaching (including clinical teaching), research, service and other scholarly activities.

Academic Staff Progression
The University is committed to providing a supportive environment to enable individuals to take ownership of their development and build a successful career at Cambridge. The University's success depends on the diversity of its staff and students. The University aims to be a leader in fostering equality and inclusion and nurturing a sense of belonging for all within our community.

The University operates a set of promotion and reward schemes for academic and research staff at all levels, including Academic Career Pathways schemes for Teaching & Scholarship staff (see *9.4 UoC Academic Career Pathways 2024 T&S*), Research & Teaching staff (see *9.4 UoC Academic Career Pathways 2024 R&T*), Postdoctoral research staff (see *Researcher Contribution Increment Scheme, https://www.hr.admin.cam.ac.uk/pay-benefits/pay-and-reward/reward-policies/reward-schemes/researcher-contribution-increment-scheme*) and more senior academics (see *9.4 Senior Research Promotions 2024-25, 9.4 UoC Academic Career Pathways, G12 2024 T&S*, and *9.4 UoC Academic Career Pathways, G12 2024 R&T*).

All eligible staff are made aware of the relevant schemes and given full access to detailed information and guidance as soon as they are released. Departmental staff development and review (SRD) processes include a focus on promotion schedules and all staff are encouraged to apply at the point they are most likely to be successful. As part of SRD processes, Appraisers support staff to develop their portfolio to ensure they can make the strongest possible case for promotion when they are ready to do so. Early in the promotions cycle, the Head of Department (also a member of the promotions committee) offers staff considering applying for promotion 1-1 meetings to mentor them through the application process. The University also offers staff a CV mentoring scheme, designed to offer staff an additional, independent view of their CV to support applications to the scheme.

Professional Services Staff Recognition and Advancement
Progression for support staff is usually through competitive application for more senior roles as they become available. Where roles develop and expand either organically or by design, the opportunity to regrade roles exist to recognise and reward these changes.

Support staff can be recognised for excellence within their roles both through non-financial programmes (our Professional Services Recognition Scheme, (see *9.4 PS Staff Recognition Scheme*), and financially through our Contribution Reward Scheme (see *9.4 Contribution Reward Scheme*) through which staff can be rewarded with bonus payments (for one-off project work) or advanced progression through their salary range for sustained excellence.

Support staff have a wide range of in-house training and development opportunities available through our Learning & Development and Information Services teams as well as more bespoke training offered by other specialist teams around the University. Where required, staff are supported with any external training necessary for the core delivery of their work.

Standard 9.5: A system for assessment of teaching and teaching staff must be implemented on a cyclical basis and must formally include student participation. Results must be communicated to the relevant staff and commented upon in reports. Evidence must be provided that this system contributes to correcting deficiencies and to enhancing the quality and efficiency of education.

In Years 1-2, student feedback is collected and collated by Course Management Committees and the MVST Part I committee. This feedback is then circulated back to individual teaching staff.

All staff teaching in Years 4-6 receive student feedback on a yearly basis via the Module Enhancement Questionnaires (MEQs), which includes separate questions for each member of the teaching team on the module, as well questions on various aspects of the learning and teaching on the module. The module questionnaires use a five-point Likert scale plus free text responses (including for each staff member). For final-year rotations and Small Group Clinical Practicals (SGCPs), which often involve different staff delivering teaching at different times to various groups of students, there's specific questions on the teaching staff (also using a five-point Likert scale plus free text responses). Should students report any issues during the course of academic year via focus groups, consultative committee meetings, participation of student representatives to other committees or via direct contact with the Tutorial Office or EQIP, these issues are promptly communicated to and discussed with staff, thus enabling rapid action.

Staff are made aware of the overall achievements that stem from teaching assessment activities through being given access to the live 'Evidence of Outcomes' document (see Standard 1.6) that lists target activities and completed tasks/achievements. This document is continuously updated.

The QA Co-ordinator maintains a record of staff's teaching training qualifications (see *Appendix 9.5 Teaching Staff and Qualifications*), to ensure that all staff who are involved with student teaching have successfully completed, or are working towards, a quality assured programme of teacher training, which effectively prepares them for their roles. This record is monitored by EQIP through the QA Plan.

In addition, the Department runs an annual Peer Observation exercise for all teaching staff. The main aim of the exercise is to contribute towards the continuous improvement in the quality of teaching and learning through continuing professional development and also identifying and

sharing elements of good teaching practice, enabling teaching staff to see other aspects and areas of teaching. All teaching staff are required to positively engage in the Peer Observation exercise every year, colleagues are paired randomly with one another to act as both observer and observee. The QA Co-ordinator keeps a log of staff involvement in the exercise and reports to EQIP on compliance amongst staff.

With the use of standardised survey questions, a benchmarking process is used to identify any potential areas of improvement as well as best practice. Survey results from the MEQs are included in the academic staff appraisal process, can form part of promotion criteria for teaching staff and shared with Module Organisers to ensure student feedback is appropriately considered and acted on as required.

As a result of our continuous assessment of teaching and teaching staff there is continuous optimisation of teaching quality and observance of the required standards. For example, we have observed an increase in adherence amongst teaching staff with regard to the guidance outlined in the Department's Teaching Guide; and those areas that have previously been identified as potential issues in surveys and other form of student feedback are no longer recurring and/or have now become the subject of positive student feedback.

Comments on Area 9
The introduction of the Teaching and Scholarship pathway has provided a route for promotion for clinical training staff, and these applications have generally been very successful, reflecting the high standard of teaching delivered by our staff.

Suggestions for improvement in Area 9
Ensure that all staff delivering teaching to Years 1 and 2 have appropriate training by way of completion of an appropriate QA assured teaching course. Alignment of feedback processes in Years 1 and 2 with those of Years 4-6 would ensure that improvements to the course were prospectively recorded.

Area 10. Research programmes, continuing and postgraduate education

Standard 10.1: The VEE must demonstrate significant and broad research activities of teaching staff that integrate with and strengthen the study programme through research-based teaching. The research activities must include veterinary basic and clinical sciences. Evidence must be provided that most teaching staff are actively involved with research programmes (e.g. via research grants, publications in congress proceedings and in peer-reviewed scientific journals).

Overview of research activities in the department
Research in the department is built around a "One Health" model, based on the recognition that substantial overlaps and synergies exist between research in human and animal systems, from infectious disease through host-pathogen interactions to genetics and physiology. This philosophy underpins our interactions and integration with other departments within the School of Biological Sciences (SBS) and across the University.

Our research is organised into three themes: *Infection and Immunity*, *Disease Dynamics* and *Systems Pathology*, with a number of cross-cutting sub-themes emphasising our research strengths; Epidemiology and Mathematical modelling, Genomics and Bioinformatics, Comparative pathology, Clinical Research and Imaging (micro to macro scale).
The research base in the Department is enhanced by our wide collaborations within the school, the University and beyond:

Interactions with the School of Biological Sciences
The Department has engaged with the recent direction of making joint appointments with other SBS departments, including recent joint appointments with Genetics and Pathology (in Comparative Mammalian Genetics [Alex Cagan] and Global Health [Caroline Trotter] respectively), adding to our existing joint appointments with the Clinical School.

Interactions with the wider University
Our department is strongly represented in many of the Interdisciplinary Research Centres and Strategic Research Networks that represent cross-departmental collaborative priority areas for the University. This includes leadership within Cambridge Infectious Diseases IRC and Cambridge Africa, as well as involvement in the Cambridge Public Health ISC, Immunology SRN, Global Food Security SRN and others.

Interactions with Industry
We collaborate with many industrial partners including Janssen, GSK and Omeros, have created successful spinouts such as Gyroscope, and host start-up companies (NoBACZ, DIOSynVax, CellCraft) to foster an environment of commercial collaboration and entrepreneurship.

Postgraduate training
Providing broad training in research for our postgraduate students is an integral part of our research strategy. Dovetailing with our education strategy, and our position within the University, we see ourselves as being in a unique position to train veterinary scientists with an interest in research, able to bring their specific veterinary expertise into the wider one-heath focus of the department, alongside graduates from other science backgrounds.

Since 2018, the department has recruited an average of 4 MPhil students and 8.5 PhD students per year, continuing a consistent increase over the last 20 years. Over this longer period, just under 20% or our postgraduate intake were veterinary graduates, with around 20% of those being graduates of our own course. We encourage this by ensuring that all of our undergraduates have active experience of research in their final years (see below).

Teaching staff involvement in Research
In addition to the primarily research-active staff who are also involved in teaching, the involvement of most of the clinical teaching staff in research, and the contribution of this to veterinary education, can most easily be seen by the fact that all veterinary students in Years 5 and 6 must undertake a research project. These projects range across the whole breadth of clinical research and involve the large majority of the teaching staff. Projects and supervisors for the last year are given in *Appendix 10.1 Year 5&6 (Elective) Research Projects* as an example.

Outcome of REF 2021
In the REF 2021 exercise, the University's explicit aim was for us to maximise income by maximising returned staff. This was in contrast to other institutions whose aim was to maximise score by selecting only the top performing researchers. Despite this, we improved our scores for Outputs and Impact over our previous REF outcomes, and also improved our (unofficial) ranking relative to other UK Veterinary Schools for Overall rank, Outputs rank and Impact rank. We returned 52 FTEs and achieved scores of 52.3% 4* (93.1% 3* + 4*) for Output, and 60% 4* (90% 3* + 4*) for Impact. We increased our ranking on both of these measures and achieved a ranking of third amongst Veterinary Schools in the UK for average outputs (second for 3* + 4*outputs). Set against this, our scores for Environment decreased over our previous outcomes to 25% 4* (87.5% 3* or 4*).

Progress since REF 2021
Our research base has continued to expand since the REF2021 submission. This can be demonstrated by looking at our annual grant income, which has been steadily increasing over the last 6 years, with the three years since the REF build-up all being better than the three years before. The value of grants applied for has increased year-on-year, as has the value of grants awarded, albeit with greater fluctuations.

Our number of publication outputs also continues to increase year-on-year, again with a notable improvement from before to after the REF submission. On average, the department in involved in around 250-300 publications per year. Departmental publications since 2018 have been cited >59,000 times, with an average of 37.5 citations per publication, and 65 of our papers have been cited >100 times (data from Clarivate/WoS). For a full list of publications in the last three academic years, see *Appendix 10.1 Research Publications 2021-24*.

Research funding
The department has been awarded research grants averaging around £2.5 (€3.01) million per annum over the past couple of years. Major externally funded research projects being pursued in the department are listed in Table 1.

Future strategy:
In the aftermath of a devastating global pandemic caused by a zoonotic pathogen, and amidst the ongoing AMR crisis, it is very clear that these areas must be central to our (and the University's) research strategy. It is also evident that these strategic issues are best addressed within a One Health framework, based on the integration of research into disease agents in humans, animals and

the environment. We are very well-placed to pursue this strategy, given our considerable strengths in One Health, zoonotic disease and AMR. This will continue to be an area of intense interest within SBS, the University, the UK and globally, which our position at the clinical/veterinary/research interface makes us ideally positioned to capitalise on.

We plan to continue to strengthen our research in this area by strategic recruitment and replacement of retiring staff, and encouragement of fellowship applications from within and outside the department. We see the future of the research in the department is in building on our expertise in One Health, zoonotics and AMR, exploiting the presence of Clinical Services by expanding clinical research and clinical/non- clinical collaborations (including with the Medical School), expanding our interactions with School and University- wide initiatives, enhancing industrial collaborations and bidding for funding for big new initiatives around zoonotic disease and AMR.

***Table 1**: Major externally funded programmes*
This table represents grants of over £100,000 (€120,480) active in the last three years

PI	Funder	Project
Allen	Orthobio Therapeutics	Treatment of osteoarthritis
Almeida	MRC	Understanding the beneficial role and antimicrobial potential of novel human gut bacteria
Bryant	EBM Charitable Trust	Equine herpesvirus (EHV-1) vaccine development programme
Bryant	Alborada Trust	Equine herpesvirus (EHV-1) vaccine development programme
Bryant	BBSRC	The molecular basis of viral tolerance in bats
Bryant	Janssen Research & Development LLC	Collaboration: inflammasome pathways as targets for chronic inflammatory diseases
Bryant	HBLB	Equine influenza programme
Bujdoso	NIH	Detection and characterization of blood-borne prions
Freeman	DACHSHUND RESCUE CIO	The pathogenesis of intervertebral disc disease
Freeman	Dachshund Rescue	Intervertebral disc disease in dogs: mineral properties and disease implications
Glennon	Wellcome trust	Artificial intelligence for rapid epidemic analysis
Grant	ASTRAZENECA	VHHS for the prevention and control of Campylobacter sp
Grant	Tres Cantos Open lab foundation	High-throughput screen for small molecules that alter the shape of enteric bacterial pathogens
Grant	BBSRC	Novel biotherapeutics for the prevention and control of Campylobacter spp. in chickens
Heeney	Trinity Challenge	The sentinel forecasting system for infectious disease risk
Holmes	Medical Research Foundation	Application of novel mass spectrometry methods to enable the rapid identification of bacteria and antimicrobial resistance directly from clinical samples
Holmes	Bill & Melinda Gates Foundation	Field kit for rapid detection of serotype-specific Shigella
Holmes	CEPI	Broadly protective betacoronavirus candidate vaccines designed using diosynvax technology

PI	Funder	Project
Ladlow	Kennel Club Charitable Trust	Defining and identifying respiratory disease in different brachycephalic breeds
Murchison	Wellcome trust	Transmissible cancer evolution and host interaction
Newton	HBLB	Equine infectious disease surveillance
Parkhill	NIHR	NIHR HPRU in genomics and enabling data
Parkhill	MRC	Untangling gene regulatory networks controlling host-pathogen interactions of the antimicrobial-resistant human pathogen Klebsiella pneumoniae
Rickets	Petplan Charitable Trust	Investigating the genetic susceptibility to canine idiopathic epilepsy using a whole genome sequencing and across-breed approach
Schwaeble	Omeros corporation	Investigator funding
Tiley	National Philanthropic Trust	Sialidase-induced endogenous neoantigen (siena) vaccine for universal protection against influenza virus
Trotter	NIHR	Health Protection Research Unit: Immunisation
Trotter	GAVI	Vaccine impact modelling consortium 2.0
Williams	Petplan Charitable Trust	Identification of novel small RNA biomarkers
Wood	BBSRC	Flutrailmap transmission and risk of avian influenza: learning more to advance preparedness

Standard 10.2: All students must be trained in scientific methods and research techniques relevant to evidence-based veterinary medicine and must have opportunities to participate in research programmes.

Students undertake a series of relevant courses to this standard. In Year 1, all students take the Foundations in Evidence Based Practice (FEBP) course, the aim of which is to produce informed consumers of research who are equipped with an understanding of the fundamental principles underlying epidemiological and clinical research methods. The objectives of the FEBP course are to provide an understanding of basic concepts in epidemiology and their relevance to clinical practice and disease prevention in patients and in the community and to introduce tools for critical assessment and evaluation of the quality of the scientific literature and appropriate application of findings to medical practice.

In Year 5, all students attend the course in Evidence Based Veterinary Medicine (EBVM) which builds on the materials delivered in the FEBP course and provide students with a framework of understanding of clinical epidemiology that they can use to apply the principles of EBVM in the practice of veterinary medicine.

The content of the EBVM course supports the students as they begin to undertake their Year 6 VetMB Research Project. For the VetMB Research Project, students may choose one of three options:

1. A standard research project, either retrospective or prospective (clinical or non-clinical)
2. A critically appraised topic (CAT) based on a specific research question
3. A qualitative literature review on a specific topic of interest

The project is then marked by the Supervisor and another independent examiner, and the students also have to give a 10–15-minute presentation on their project to the rest of the cohort, which is also marked.

In addition, some students who choose a science-based discipline in third year will take part in laboratory or computational based research projects and/or will write a library-based dissertation on a specific topic.

Standard 10.3: The VEE must provide advanced postgraduate degree programmes, e.g. PhD, internships, residencies and continuing education programmes that complement and strengthen the study programme and are relevant to the needs of the profession and society.
The Department is committed to the delivery of a world-class post-graduate education that is based on scientific scholarship and makes use of cutting-edge teaching methods to prepare the next generation of researchers, clinicians and clinician-scientists. In the VEE, we provide post-graduate training for qualified veterinary surgeons through our two Scholarship programmes, for Junior and Senior Clinical Training Scholars (Tables 10.3.1, 10.3.2). Our Junior Clinical Training Scholarship in Small Animal Studies provides a breadth of experience and teaching, with scholars rotating through the different clinical teams during the year long programme, akin to an Internship. Our discipline specific Junior Scholarship (Internship) programmes in Farm Animal Health and Production, as well as selected small animal disciplines, enable more focused training over one year. Our Senior scholars train as future Specialist consultants within their chosen small animal discipline over a period of three years, being a Residency training programme.

Table 10.3.1. Number of Junior Clinical Training Scholars (Interns)

Training area	**Number enrolled 2023-2024**
Small Animal Rotating	12
Diagnostic Imaging	1
Anaesthesia	1
Oncology	1
Farm Animal Health and Production	3
Total Interns	**18**

Table 10.3.2. Number of Small Animal Senior Clinical Training Scholars (Residents)

Discipline	**Specialist College**	**Number of SCTS (as of November 2024)**	**Number of previous SCTSs who Successfully completed their training programme over the preceding 5 years**
Anaesthesia	European College of Veterinary Anaesthesia and Analgesia	3	5
Anatomic Pathology	European College of Veterinary Pathology American College of Veterinary Pathology	2	4
Cardiology	European College of Veterinary Internal Medicine (Cardiology)	3	Residency Programme established November 2021
Clinical Pathology	European College of Veterinary Clinical Pathology American College of Veterinary Pathology	3	5

Discipline	Specialist College	Number of SCTS (as of November 2024)	Number of previous SCTSs who Successfully completed their training programme over the preceding 5 years
Diagnostic Imaging	European College of Veterinary Diagnostic Imaging	3	7
Internal Medicine	European College of Veterinary Internal Medicine (Internal Medicine)	4	9
Neurology	European College of Veterinary Neurology	3	3
Oncology	European College of Veterinary Internal Medicine (Oncology)	3	5
Surgery	European College of Veterinary Surgeons	2	6
Totals		**26**	**44**

The VEE delivers interdisciplinary research in One Health, combining its Faculty's expertise in veterinary, medical, biological, computational and social sciences with local and international collaborative networks across the academic, charitable, farming and pharmaceutical sectors. This stimulating scientific environments provides domestic and overseas students with diverse opportunities for postgraduate research training leading to PhD, MPhil and Vet MD degrees. We typically admit 10-15 new postgraduate students per academic year, mostly into our PhD programme (Table 10.3.3). Around 20-25% of our intake have veterinary qualifications; many of them choose non-clinical research projects, opting instead to gain expertise in microbiology, genetics, bioinformatics or public health. This is a particular strength of our VEE, complementing the clinically focused veterinary curriculum to offer students a broader range of career options in One Health. Funding sources for postgraduate students are split among Cambridge scholarships, charitable grants, industry partnerships, and MRC/BBSRC DTP, while a few students are self-funded through existing employment as Research Assistants. We have a good track record of attracting outstanding veterinarians from overseas, particularly from Africa, who have been awarded prestigious scholarships to do an MPhil or PhD in our Department.

Table 10.3.3. Number of students registered in postgraduate research training

Nos enrolled	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***
PHD							
Bio Sci	8	9	2	1	4	8	6
Vet Med	4	4	2	6	5	3	4
Total PHD	12	13	4	7	9	11	10
MPHIL	0	0	0	0	0	0	0
Bio Sci	0	0	0	0	0	1	1
Vet Science	1	1	4	7	8	2	0
Total MPHIL	1	1	4	7	8	3	1
Total	13	14	8	14	17	14	11

Vets enrolled	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***
PHD							
Bio Sci	1	0	0	0	0	0	2

Nos enrolled	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*
Vet Med	3	1	1	4	0	2	1
Total no. PHD	4	1	1	4	0	2	3
MPHIL	0	0	0	0	0	0	0
Bio Sci	0	0	0	0	0	0	0
Vet Science	0	1	3	2	3	1	0
Total no MPHIL	0	1	3	2	3	1	0
Total	4	2	4	6	3	3	3

Prospective number of students registered for post-graduate programmes for the next 3 academic years.
The number of students enrolled in our postgraduate training programmes, including the Senior and Junior Clinical Training Scholarships, PhD by Research and MPhil by Research programmes (Table 10.3.3), is expected to remain steady over the next three academic years.

Description of how the postgraduate clinical trainings of the VEE contribute to undergraduate veterinary education and how potential conflicts in relation to case management between post-and undergraduate students are avoided.
Our Interns and Residents (post-graduate students) are involved in case management in our VTHs, and work as part of a team alongside final year students. During their final year, students have primary care responsibility and are supervised by a JCTS or SCTS and supported by a senior clinician who is often board-certified. JCTS and SCTS receive training in clinical teaching and assessment and contribute to the assessment of final year students. Students have various opportunities to alert senior clinicians on rotations to any conflict related to case management, but the way in which rotations are structured means that such conflicts typically never arise.

PhD and MPhil students are encouraged to contribute to undergraduate teaching, particularly small-group tutorials. Some of our PhD students have also given guest lectures in the 3rd year Dynamics of Infectious Diseases course, on specialist topics such as bovine tuberculosis, SARS-CoV-2 in deer, or bacterial genomics.

Description of how the continuing education programmes provided by the VEE are matched to the needs of the profession and the community.
The VEE is dedicated to supporting veterinary professionals beyond in-house teaching for undergraduate and postgraduate students. We offer the highest quality Continued Professional Development (CPD) opportunities and training for the wider veterinary community, reinforcing our reputation as a leader in veterinary education and excellence. We offer in-person and online CPD courses covering a wide range of topics across many disciplines of veterinary medicine. We have recently built in the training we provide by established a calendar of regular CPD events offering a fresh and modern alternative to traditional training. This includes our Cambridge Lunchtime Learning initiative, where our specialist vets take their expertise directly to referring vet practices, we also offer flexible online programs designed to enhance surgical skills without the inconvenience of having to attend in person. Finally, our Cardio Club is a vibrant community for veterinary professionals passionate about discussing cases and learning from experts in small animal cardiology. Further details of some of our courses are given in Table 10.3.4.

Table 10.3.4. Examples of continuing education courses provided by the VTE including number of attendees

Name	Description	Number of attendees
Lunchtime Learning Sessions	In person learning. Specialists lead outreach sessions delivered to veterinary staff in their practice environment.	Variable, depending on practice. Range 5-22 per visit
Cardiology Club	On line learning. A vibrant community for veterinary professionals committed to advancing small animal cardiology. Membership provides exclusive access to invaluable opportunities, including case discussions, best practices, expert feedback, and the chance to be part of a community offering academic support and great networking opportunities.	Currently 26 veterinary surgeons enrolled
Surgery Refresher Webinar series	On line learning. A series of weekly soft tissue and orthopaedics case-based interactive sessions delivered by Specialists.	180 attendees enrolled. An average of 50 attending each session.
Orthopaedics and Neurology CPD day	In person learning. Specialist led event delivering case based and practical learning for small animal practitioners.	23 attendees
Oncology CPD evening event	In person learning. Specialist led event providing updates on key topics encountered in primary care practice.	14 attendees
Physiotherapy daytime CPD event	In person learning. Hand on sessions enabling veterinary staff to develop their knowledge of physiotherapy.	15 attendees

Standard 10.4: The VEE must have a system of QA to evaluate how research activities provide opportunities for student training and staff promotion, and how research approaches, methods and results are integrated into the study programme.
Cambridge is a research-led University, and for the last 70 years has been graduating veterinary surgeons who have made substantial contributions to veterinary research, leadership, government and industry.

There are different expectations for research activity based on academic pathway. The majority of clinical staff are on the Teaching and Scholarship pathway, and metrics for promotion include research activity. Teaching staff are allocated time for research, and this allocation is discussed at annual staff review and development (SRD) meetings and adjusted as required. Staff are encouraged to integrate their research findings into their teaching. University and Department funding is provided for research activities, and details of other funding opportunities are periodically circulated to staff. Senior and Junior Clinical Training Scholars are also expected to participate in clinical research and are allocated a senior clinician who provides guidance and support. Scholars present their research to the Department by way of a short oral presentation and are encouraged to publish and present their work at a National or International conference.

The Research Oversight Committee has oversight of the research in the Department of Veterinary Medicine and oversees the strategic direction of research. A sub-committee, the Clinical Research Committee, meets approximately monthly and provides guidance and support to clinical staff engaged in clinical research. A fund has been allocated to which clinical members of staff are invited to apply twice yearly, and a process for reviewing these applications and approving or giving feedback has been established. A dedicated Postgraduate Education Committee oversees research carried out by PhD and MPhil students in the Department.

Research is an integral component of the veterinary undergraduate course. In their third-year students, other than affiliate students, who already have an honours degree, pursue a subject of their choice for a whole year to achieve a full Cambridge BA degree, usually in a Natural Science subject such as anthropology, biochemistry, pathology, developmental biology, physiology, neuroscience, pharmacology, and Zoology. This provides Cambridge veterinary students an exciting opportunity to work with scientists at the cutting edge of their field, and as part of this degree they usually also carry out an in-depth research project of their own. These research projects are usually performed on the central Cambridge site and supervised by experienced researchers. QA of research work undertaken by students is performed by staff who have received training in supervising and marking, and input from external examiners also feeds into the QA process.

Veterinary undergraduate students also undertake a research project in the 5th and 6th years and are supervised and guided by experienced clinical researchers. The Clinical Research Committee oversee these projects. Students choose between a standard research project, either retrospective or prospective, clinical or focused on topics that are closely related to veterinary medicine, critically appraised topics (CAT) or a qualitative literature review. They may either develop their own research idea under the supervisor's guidance or ask for supervisor's advice to identify suitable research questions. Students are also provided with written guidance on Moodle. Students are expected to produce a written summary of their research, which is evaluated by at least two members of staff, and input from external examiners also feeds into the QA process. In addition, students give a short oral presentation at the end of their 6th year which is also evaluated by members of staff and colleagues.

Comments on Area 10

The VEE benefits from strong collaborative networks within the University and beyond. Undergraduate education is based on scientific scholarship, and all students have opportunities to engage in research at different stages of their course. Providing broad training in research for our veterinary and non-veterinary postgraduate students is also an integral part of our research strategy.

Suggestions for improvement in Area 10

To further strengthen our clinical research output, we could explore additional funding opportunities and work on ways of addressing the challenge of relatively limited time for clinical research for some staff.

ESEVT Indicators *(see Annex 4)*

	Raw data from the last 3 complete academic years	2023-24	2022-23	2021-22	Mean
1	n° of FTE teaching staff involved in veterinary training	156	155	147	153
2	n° of undergraduate students	389	386	383	386
3	n° of FTE veterinarians involved in veterinary training	109	107	109	108
4	n° of students graduating annually	66	50	52	56
5	n° of FTE support staff involved in veterinary training	59	53	46	53
6	n° of hours of practical (non-clinical) training	714	694	694	701
7	n° of hours of Core Clinical Training (CCT)	1076	996	996	1023
8	n° of hours of VPH (including FSQ) training	217	217	217	217
9	n° of hours of extra-mural practical training in VPH (including FSQ)	41	41	41	41
10	n° of companion animal patients seen intra-murally	9027	8578	7674	8426
11	n° of individual ruminant and pig patients seen intra-murally	156	102	78	112
12	n° of equine patients seen intra-murally	260	383	368	337
13	n° of rabbit, rodent, bird and exotic patients seen intra-murally	80	58	68	69
14	n° of companion animal patients seen extra-murally	4125	3881	3528	3845
15	n° of individual ruminants and pig patients seen extra-murally	8549	6725	10709	8661
16	n° of equine patients seen extra-murally	1994	2121	2017	2027
17	n° of rabbit, rodent, bird and exotic patients seen extra-murally	119	110	159	129
18	n° of visits to ruminant and pig herds	827	668	1014	836
19	n° of visits to poultry and farmed rabbit units	2	2	2	2
20	n° of companion animal necropsies	156	110	167	144
21	n° of ruminant and pig necropsies	57	79	133	90
22	n° of equine necropsies	5	0	1	2
23	n° of rabbit, rodent, bird and exotic pet necropsies	206	248	91	182
24	n° of FTE specialised veterinarians involved in veterinary training	33	32	34	33
25	n° of PhD graduating annually	8	11	10	10

	Calculated Indicators from raw data	VEE values	Median values[1]	Minimal values[2]	Balance[3]
I1	n° of FTE teaching staff involved in veterinary training / n° of undergraduate students	0.40	0.15	0.13	0.27
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	1.93	0.84	0.63	1.30
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0.94	0.88	0.54	0.40
I4	n° of hours of practical (non-clinical) training	700.67	953.50	700.59	0.08
I5	n° of hours of Core Clinical Training (CCT)	1022.67	941.58	704.80	317.87
I6	n° of hours of VPH (including FSQ) training	217.00	293.50	191.80	25.20
I7	n° of hours of extra-mural practical training in VPH (including FSQ)	41.00	75.00	31.80	9.20
I8	n° of companion animal patients seen intra-murally and extra-murally / n° of students graduating annually	219.13	67.37	44.01	175.12
I9	n° of individual ruminants and pig patients seen intra-murally and extra-murally / n° of students graduating annually	156.66	18.75	9.74	146.92
I10	n° of equine patients seen intra-murally and extra-murally / n° of students graduating annually	42.21	5.96	2.15	40.06
I11	n° of rabbit, rodent, bird and exotic seen intra-murally and extra-murally/ n° of students graduating annually	3.54	3.11	1.16	2.38
I12	n° of visits to ruminant and pig herds / n° of students graduating annually	14.93	1.29	0.54	14.39
I13	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.04	0.11	0.04	-0.01
I14	n° of companion animal necropsies / n° of students graduating annually	2.58	2.11	1.40	1.18
I15	n° of ruminant and pig necropsies / n° of students graduating annually	1.60	1.36	0.90	0.70
I16	n° of equine necropsies / n° of students graduating annually	0.04	0.18	0.10	-0.06
I17	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	3.24	2.65	0.88	2.36
I18	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.59	0.27	0.06	0.53
I19	n° of PhD graduating annually / n° of students graduating annually	0.17	0.15	0.07	0.10

1 Median values defined by data from VEEs with Accreditation/Approval status in May 2019

2 Recommended minimal values calculated as the 20th percentile of data from VEEs with Accreditation/Approval status in May 2019

3 A negative balance indicates that the Indicator is below the recommended minimal value

***** Indicators used only for statistical purpose

Comments on the Indicators

We are currently considering whether we can reduce the number of weeks students spend in CCT in Year 6, with an ongoing focus on teaching in a general practice context. We are also actively increasing the number of hours of practical non-clinical training, for example, new case-based seminars have been introduced into the Year 4 and 5 curriculum, and we are continuing to evolve our curriculum away from didactic lectures towards more interactive forms of teaching (such as flipped classroom-based approaches).

Suggestions for improvement on Indicators

We are actively trying to increase the number of equine post-mortems that are currently undertaken by investigating collaborations with nearby equine practices and pathology laboratories. We hope to increase the case load of exotic animal species by continuing to expand our first opinion small animal practice within the VTH.

Glossary of terms used in this SER

BA - Bachelor of Arts (degree obtained after 3 years study to Honors level, i.e. Tripos Part II level)
BOAS - Brachycephalic obstructive airway syndrome
BVA – British Veterinary Association
CAO – Central Admissions Office (of the University)
CamSIS – the central student information database used across the University including colleges
CEVS – Cambridge Equine Veterinary Society – student society
CFAVS - Cambridge Farm Animal Veterinary Society – student society
CUSU – Cambridge University Students' Union – student society
CUVS – Cambridge University Veterinary Society – student society
CUVZS - Cambridge University Veterinary Zoological Society – student society
DoS - Director of Studies, a Cambridge College appointment, responsible for overseeing the academic progress of students, appointing supervisors to support undergraduates' learning and progression in relevant subject; organising further, remedial academic support as required
DR - Veterinary anatomy dissection room
ADRC – Accessibility and Disability Resources Centre
EMS – Extra Mural Studies (may be preclinical or clinical)
EQIP – Education Quality Improvement Programme
FBVM – Faculty Board of Veterinary Medicine
HCM - Hypertrophic cardiomyopathy
HEFCE – Higher Education Funding Council for England
HEA – Higher Education Academy
IVDD - Intervertebral disc disease
LGBT+ (LGBTQ) - Lesbian, Gay, Bisexual and Transgender/Transsexual plus
LOL – Learning Opportunities Log
MedST – Medical Sciences Tripos
MRI - Magnetic resonance imaging
NHS – National Health Service
NST Part II – 3rd year Natural Science Tripos
OIA – Office of the Independent Adjudicator
OSCCA - Office of Student Conduct, Complaints and Appeals (Central University)
QAA – Quality Assurance Agency
QVSH – Queen's Veterinary School Hospital
RCVS – Royal College of Veterinary Surgeons
RSPCA - Royal Society for the Prevention of Cruelty to Animals
Senior Tutor - Appointed by each Cambridge College, whose responsibilities include appointing and managing a team of subject-specific Directors of Study, Tutors and other student support staff in their Cambridge College
SpLD – Specific Learning Disorder
SSD – Student Support Document
UIS - University Information Services, providing IT support to the programme
UL – University Library
Tripos - All students admitted to University of Cambridge are enrolled on a three- or four-year Tripos course that leads to the award of a Bachelor's degree
Tutors - A Cambridge College position, with oversight of student welfare
VetMB - Bachelor of Veterinary Medicine, the professional veterinary degree awarded by University of Cambridge

VetST - Veterinary Sciences Tripos: the Tripos (undergraduate science degree) onto which all first- and second-year veterinary students are enrolled. Marks from VetST exams contribute to the 2nd VetMB, the preclinical element of the overall VetMB degree
VetST Part IA – 1st year Veterinary Sciences Tripos
VetST Part IB – 2nd year Veterinary Sciences Tripos
VSCS - Veterinary School Clinical Supervisor: oversees students' progress with extra-mural studies and their professional development. A VSCS must always be a qualified veterinarian working at the University of Cambridge. For students in clinical years a VSCS must be a veterinarian working within the Department of Veterinary Medicine. The training and appointment of VSCSs is overseen by the clinical EMS Co-Ordinator (Professor Anna Hollis)

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