

Self Evaluation Report

for the European Association of Establishments
for Veterinary Education (EAEVE)

Full Visitation 10 – 14 October 2022



Self Evaluation Report

University of Liverpool

School of Veterinary Science

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Introduction

Brief history of the VEE and of its previous ESEVT Visitations (if any)

The University of Liverpool's key operational management committee is the Senior Leadership Team (SLT), which is chaired by Vice Chancellor Dame Janet Beer. The SLT is made up of leads for Human Resources, Finance, Education, Research & Impact, Cultural Engagement and the three Executive Pro-Vice-Chancellors who each lead one of the three Faculties that together make up the University: The Faculty of Health and Life Sciences, the Faculty of Science and Engineering and the Faculty of Humanities and Social Sciences.

The [Faculty of Health and Life Sciences](#) (FHLS) is led by Professor Louise Kenny, and is in turn is made up of four institutes:

- [Institute of Infection, Veterinary and Ecological Sciences](#) (IVES)
- Institute of Population Health
- Institute of Life Course and Medical Sciences
- Institute of Systems, Molecular and Integrative Biology

The School of Veterinary Science (SVS) is located within IVES, which was created in 2020 to integrate research in human and animal infectious diseases, veterinary science, ecology and evolution to benefit people, animals and ecosystems, nationally and globally. This allows for highly interdisciplinary One Health approaches to address research challenges, and engages a broad portfolio of biomedical academic staff in providing educational input to the BVSc curriculum. The Institute is focused on multidisciplinary approaches integrating medical, veterinary, and environmental studies, and has seven departments of which four sit within the SVS:

- Department of Small Animal Clinical Science (DSACS)
- Department of Livestock and One Health (LOH)
- Department of Equine Clinical Science (DECS)
- Department of Veterinary Anatomy, Physiology and Pathology (VAPP)

The IVES departments that are not in the SVS are:

- Infection Biology and Microbiomes
- Evolution, Ecology and Behaviour
- Clinical Infection, Microbiology and Immunology

The last ESEVT visitation was in November 2012 and was conducted in collaboration with the Royal College of Veterinary Surgeons (RCVS) visitation. The final version of the report was published in August 2013 and received full approval by ECOVE.

Main features of the VEE

The SVS was led by Professor Susan Dawson from January 2011 until January 2022, when the current Dean, Professor Paul Lunn was appointed. The SVS is physically split between the main University site, where most of the first three years of the curriculum are delivered, and the Leahurst campus on the Wirral, where the final two clinical years of the curriculum are delivered. The SVS operates three referral hospitals (small animal, equine, and production animal) and two ambulatory practices (equine and production animal) from Leahurst, and one small animal first opinion clinic (University Veterinary Practice) in Liverpool.

Brief summary of the main developments since the last Visitation

- A new curriculum was rolled out across all five years of the curriculum, starting in September 2013, and was fully implemented in 2016.
- The Henry Edwards Learning Centre was opened in 2013, and the Leahurst lecture theatre and student common room were refurbished and expanded in 2015.
- The Equine Isolation Unit was opened in 2021.

Major problems encountered by the VEE (whether resolved or not)

The COVID-19 pandemic had a significant disruptive impact on the VEE during the past two and a half years. This was managed through a variety of strategies, including social distancing, testing and isolation protocols, remote and hybrid online teaching. We are now exiting from these restrictions and reviewing what was learnt that may continue to have a positive role in the post-pandemic era. This will lead to additional live-streaming of teaching, and recording of didactic materials.

Class size grew substantially for cohorts in 2020-21 and 2021-2022 as a result of COVID-related modifications to grading of school exams. The large cohorts that were admitted are being managed by investing additional resources in education delivery. With the return of conventional grading of entry examinations, class cohort size is expected to reduce this year, will be easier to manage, and new staff funding is available to address any future increases in class cohort size.

Recruitment and retention, particularly of clinical educators, is a significant challenge. Competition from private practices and an inadequate number of trained specialists in some disciplines continues to significantly impact our teaching hospitals.

Version and date of the ESEVT SOP which is valid for the Visitation

ESEVT SOP 2019 | 30 May 2019 (amended in December 2020 and in September 2021).

Area 1. Objectives, Organisation and QA Policy

Standard 1.1: The VEE must have as its main objective the provision, in agreement with the EU Directives and ESG recommendations, 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 all the ESEVT Standards.

Vision statement of the University of Liverpool, School of Veterinary Science is:

To be a global leader in advancing the health and wellbeing of animals, people and the environment through excellence in education, research and clinical service.

Mission statement of the University of Liverpool, School of Veterinary Science is:

To shape the future of the veterinary profession by preparing graduates with the skills and resilience needed for lifelong career success and satisfaction; driving discovery that advances the health and welfare of animals, people and the environment; providing world-class veterinary care in all aspects of veterinary practice; and by building an inclusive, respectful and sustainable community committed to the advancement of the veterinary profession.

Goals statement of the University of Liverpool, School of Veterinary Science is:

- Teaching: deliver excellent undergraduate and post graduate veterinary education that prepares graduates for professional and personal success.
- Research and Impact: produce nationally and internationally recognized research that improves the health and wellbeing of animals, humans and the environment and shapes the future of the veterinary medicine and education.
- Clinical Service: provide outstanding veterinary care to our animal patients in an environment that fosters learning and clinical discovery, and models the best practices in contemporary veterinary medicine.
- Culture: Create a community of trust, respect and wellbeing which provides a safe and inclusive space for students and staff to collaborate, innovate and look after one another.
- Institutional and Professional Services: strengthen the infrastructure and operations.

Description of how the VEE ensures that the provided core curriculum enables all new graduates to perform as a veterinarian capable of entering all commonly recognised branches of the veterinary profession

A new curriculum was successfully rolled out across all five years of the BVSc programme from 2013 to 2016 based on the day one competences outlined by EAEVE and the RCVS. The details can be viewed in Area 3. This is not a static curriculum but evolves in response to feedback from students, staff, graduates, employers and external stakeholders, and changes in the profession. It is aligned with the [University of Liverpool's Strategy 2026](#)¹ and the [Liverpool Curriculum Framework](#)².

The SVS engages through the Veterinary Schools Council (VSC) and the RCVS to monitor feedback from post-graduation surveys. Since 2021 UK graduates have had the benefit of a new transition to veterinary practice year, the Graduate Development Phase (GDP) developed by the RCVS to support students. Students and employers are surveyed on signing up to the GDP which results in year 1 external outcome assessment results to support monitoring of our programme outcomes. An alumni survey, 3 years post-graduation, is held by the VSC. See Standard 1.4 for more detail.

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.

The decision-making process, organisation and management of the VEE must allow implementation of its strategic plan and of a cohesive study programme, in compliance with the ESEVT Standards.

¹ <https://www.liverpool.ac.uk/strategy-2026/>

² <https://www.liverpool.ac.uk/media/livacuk/centre-for-innovation-in-education/liverpool-curriculum-framework/liverpool-curriculum-framework-booklet.pdf>

VEE details: University of Liverpool School of Veterinary Science:

LIVERPOOL CAMPUS:

School of Veterinary Science
University of Liverpool
Thompson Yates Building
Liverpool L69 3GB

Tel: 0151 794 8238/5660; Fax 0151 794 4279

LEAHURST CAMPUS:

School of Veterinary Science
University of Liverpool
Leahurst Campus
Neston, Cheshire, CH64 7TE

Tel: 0151 794 6002; Fax: 0151 794 6005

Further information: (<https://www.liverpool.ac.uk/veterinary-science/contacts/>)

Head of School:

Professor D. Paul Lunn BVSc MS PhD Dip. ACVIM MRCVS
Dean, School of Veterinary Science
University of Liverpool, Leahurst Campus
Neston, Cheshire, CH64 7TE

paul.lunn@liverpool.ac.uk

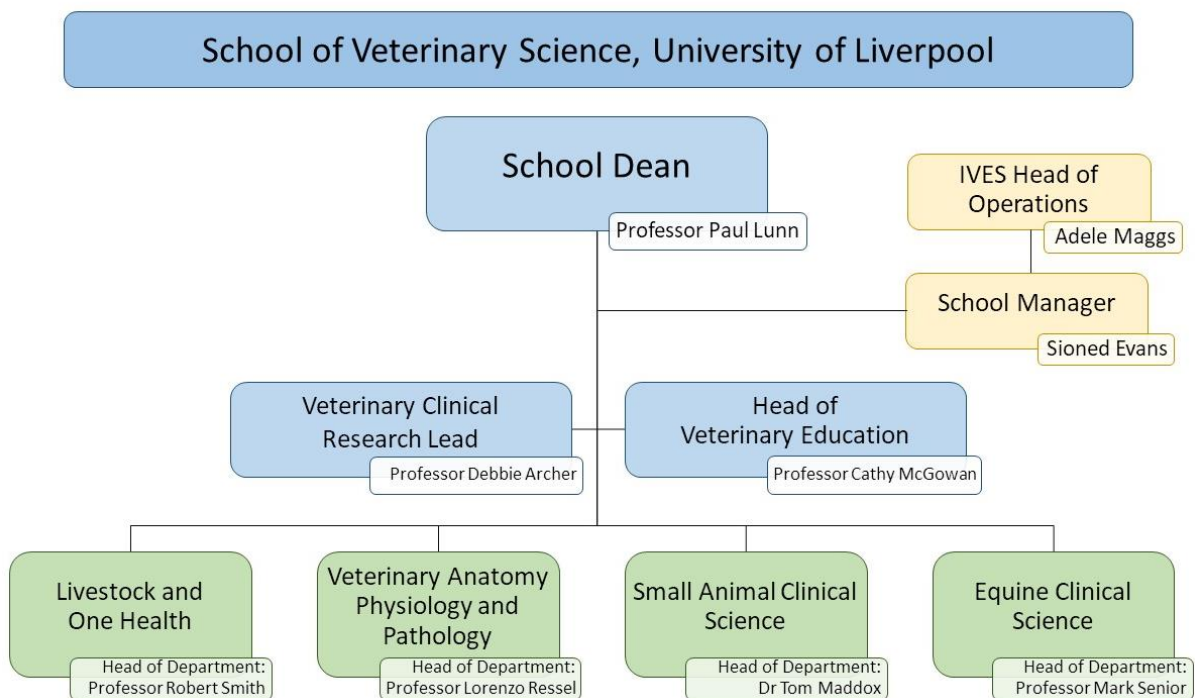
Mobile: 07506

Office: 0151 794 6015

031645

Organisational chart (diagram) of the VEE with a brief description of the decision-making process

The Veterinary School Executive Team (VSET), chaired by the Dean, is illustrated in the organization chart below. Two of the members of the team are non-academics, the IVES Head of Operations (HOO) and the School Manager, who are members of the Professional Services division of the university. While their role is to support VSET and the Dean, their line reports are within the Professional Services structure. The IVES HOO is also the Professional Services lead for the rest of IVES.



Veterinary School Executive Team (VSET) - Meets every 2 weeks.

Position	Incumbent
Dean of School	Professor D. Paul Lunn <i>BVSc MS PhD MRCVS Dip ACVIM</i>
Head of Veterinary Education	Professor Cathy McGowan, <i>BVSc MACVSc PhD DEIM DipECEIM CertVBM FHEA FRCVS</i>
Head of Veterinary Research	Professor Debra Archer, <i>BVMS PhD CertES(Soft Tissue) DipECVS FHEA FRCVS</i>
Head of Department of Equine Clinical Science	Professor Mark Senior <i>BVSc PhD SFHEA CertVA DipECVAA MRCVS</i>
Head of Department Livestock and One Health	Professor Robert Smith <i>BSc (Hons) BVSc PhD Dip ECAR, Dip ECBHM FRCVS</i>
Head of Department of Small Animal Clinical Science, (Interim)	Senior Lecturer Tom Maddox, <i>BVSc PhD CertVDI DipECVDI MRCVS</i>
Head of Department of Veterinary Anatomy, Physiology and Pathology	Professor Lorenzo Ressel <i>DVM PhD DipECVP FHEA MRCVS</i>
IVES Head of Operations	Ms Adele Maggs
School Manager	Ms Sioned Evans

The school has four departments, each of which oversees a component of our clinical operations.

Department of Equine Clinical Science

The Department of Equine Clinical Science is responsible for delivering equine teaching and research with the aim of improving the health and welfare of equines regionally, nationally and globally. The department undertakes multidisciplinary research, working collaboratively with research groups within the University, other UK and international academic institutions and private equine hospitals.

Philip Leverhulme Equine Hospital - is a large specialist-led equine hospital serving horse owners and veterinary surgeons in the North-West of the UK, North Wales and beyond. It is one of the most comprehensive referral centres in the country, with extensive imaging facilities including standing MRI, standing CT, gamma scintigraphy, surgical facilities supported by an intensive care unit with one of the largest colic caseloads in the country.

Leahurst Equine Practice - provides a full complement of ambulatory and clinic based first opinion services. The practice offers both routine services such as vaccinations and worming, pre-purchase examinations, lameness evaluations, routine surgery including castrations, as well as specialist clinics focusing on certain conditions such as poor performance and weight management.

Department Livestock and One Health

The Department of Livestock and One Health delivers teaching and research on the epidemiology of health and disease in populations and communities, the selection and spread of antimicrobial resistance, and the determinants of pathogen distributions. The department is responsible for Livestock, Epidemiology and Veterinary Public Health teaching.

Farm Animal Practice - provides routine and emergency services to dairy, beef and sheep farmers as well as small holdings who keep small ruminants and camelids. The practice covers the Wirral and Cheshire and also undertakes referral/consultancy work from veterinary surgeons elsewhere.

Department of Small Animal Clinical Science

The Department of Small Animal Clinical Sciences delivers teaching and research across the breadth of small animal and exotic medicine and surgery. It operates two hospitals and a clinical pathology laboratory, and houses many of our specialist clinicians focused on teaching and discovery in disciplines such as cardiology, oncology, obesity and metabolic disease, pain management, musculoskeletal disease, in addition to medicine and surgery.

Small Animal Teaching Hospital - is a large, modern and well-equipped hospital. A staff of over 50 veterinary surgeons providing specialist diagnosis and treatment to cats and dogs referred from a variety of practices, the hospital is one of the busiest small animal referral centres in the UK, seeing over 12,000 appointments per year. Facilities include high-field MRI and 80-slice CT scanners, two digital radiography rooms, a radiotherapy suite, three operating rooms, in-house laboratory, dedicated cardiology, dermatology and endoscopy suites.

University of Liverpool Small Animal Practice – is a purpose built primary care practice in the centre of Liverpool. It is extensively equipped with a surgical suite, imaging facilities and an in-house diagnostic laboratory. It also houses an exotic pet service.

Department of Veterinary Anatomy, Physiology and Pathology

The Department of Veterinary Anatomy, Physiology and Pathology studies the morphological and functional structure of normal and pathologically altered organs and systems and their morbid conditions and causative agents. They support the delivery of veterinary care with state-of-the art diagnostics and infection control. The department is focused on teaching, researching and diagnosing the normal and morbid structure and function of tissues and organs, and their causative agents, and applying artificial intelligence and 3D modelling to tissue morphology.

Diagnostic Laboratory Services – include anatomical pathology services for domestic and farm animals, zoo animals and forensic pathology. There are also extensive histopathology and microbiology laboratories supporting our hospitals and providing external services.

Bachelor of Veterinary Science (BVSc) Programme Management

(See Appendix 1.1 A, B and C for organization chart and description, Terms of Reference are available for all committees)

SVS Curriculum Board

Oversees all education programmes at SVS, including BVSc and Post-Graduate Taught (PGT) and intercalated degrees. Scrutinises and approves changes to programmes and modules received from Boards of Studies, including BVSc, before sending to FHLS for approval.

SVS Undergraduate (UG) Board of Studies

Recommends changes to the BVSc programme to SVS Curriculum Board. Ensures student monitoring and feedback processes are in place in accordance with university policy. Ensures assessment and associated processes, including responding to and acting on external examiner reports follow the Code of Practice on Assessment. Receives and considers reports and recommendations from the following UG sub-committees:

Recruitment, Admissions, and Widening Participation Committee – Reviews development and implementation of policies and practices relating to the recruitment and admission of students to the BVSc degree. Identifies and minimises barriers to access, success and progression of students and develops, implements and monitors policies and practices relating to widening participation, fair access and fair admissions.

Student Monitoring Subcommittee – Monitor, support and address issues associated with student engagement and wellbeing.

Staff-Student Liaison Committee – Provides a forum for staff and students to discuss concerns, processes and enhancements to the academic, social and wellbeing programmes in the SVS, based on student feedback.

Extramural Studies Subcommittee – Oversees performance of the extra mural studies (EMS) program, and manage communications with students, staff, and RCVS.

Education Committees (3) – There are three education committees: Pre-clinical (years 1-2); Para-Clinical (years 3-4); and Clinical (year 4-5). Each committee is charged with sharing information and facilitating effective delivery of teaching and rotations for their respective years.

BVSc Board of Examiners (incorporates Progression Board and Extenuating Circumstances Committee)

Responsible for the assessment of students and the determination of awards. Makes decisions regarding student progression to the next year of study and monitoring the performance of students, dealing with unsatisfactory progress and taking remedial action where appropriate.

Veterinary Education Senior Leaders Group

Makes strategic decisions and plans for BVSc programme, including resource planning, to ensure implementation of Curriculum Board decisions and communicates to VSET as required. Ensures that effective processes are in place for obtaining feedback from graduates, employers, sponsors and relevant professional, statutory or regulatory bodies and agreeing any action to be taken as a consequence. Receives input from the Recruitment, Admissions and Widening Participation Group, the Liverpool Veterinary Education Research Group (LIVERG), and from:

Curriculum Development Group (CDG) - Develops the curriculum in response to feedback from internal and external outcomes assessments, external influences (accrediting bodies) and feedback from Veterinary Education leaders. Makes recommendations and proposals to Veterinary Education Senior Leaders Group.

Veterinary Education Management Group

Works on new and ongoing management issues arising during the semester.

Committees that have responsibility over both the SVS and IVES

Leahurst Campus and SVS Health & Safety Committee

This committee is responsible for compliance with statutory obligations and the University's Health & Safety policy in respect of all spaces within which the SVS operates, and the Leahurst campus, including the SVS farms. The committee operates the University Health & Safety policies and ensures that changes to policies and processes are communicated to campus staff, students and other parties. The committee also monitors and reports progress against the Institute's Health and Safety Management Profile (HASMAP) Action Plan, and provides leadership in developing and maintaining a culture of 'safe working' across the campus.

Ethics Committee

University of Liverpool research ethics committees review and assess research proposals involving human participants and / or animals under veterinary care for ethical risk. Projects deemed to carry more than minimal risk are reviewed at the central university level. Projects deemed to carry minimal risk are reviewed at Institute level. The IVES ethics committee carries primary responsibility for review of proposals focussed on animals under veterinary care. Experimental animal work is reviewed by the Animal Welfare Ethical Review Board (consistent with the statutory obligation).

Equality and Diversity Committee

To identify priority areas for development, produce key action points and policies in order to advance Equality, Diversity, Inclusion and Wellness within IVES and ensure effective communication and signposting of university wide wellbeing and support schemes to institute members.

Wellbeing Group

The group is responsible for monitoring wellbeing at the institute, and proactively trying to improve staff and student wellbeing via a number of activities and schemes, and also signposting to the wider university resources where appropriate.

Space and Infrastructure Committees (Liverpool and Leahurst)

The Space & Infrastructure Committees plan, allocate, track, manage, deliver and report on the use of space and facilities across the Institute, to ensure that space is used efficiently and equitably and in line with relevant policies.

Formal collaborations with other VEEs

The SVS is a member of the Veterinary Schools Council, which is 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, constituting Region 1 of EAEVE. The Dean sitting on Council whilst other representatives of the SVS sit on various subcommittees. Through its membership, the Council engages in representative and policy work to ensure that the voice of its member schools is recognised for its experience, innovation and commitment to the proper care of animals. Staff members sit on the RCVS education and specialist qualification committees. Three members of staff are EAEVE experts.

The Head of Veterinary Education is responsible for the veterinary curriculum:

Professor Cathy McGowan, BVSc MACVSc PhD DEIM DipECEIM CertVBM FHEA
FRCVS
School of Veterinary Science
University of Liverpool, Leahurst Campus
Chester High Road
CH64 7TE
cmcgowan@liverpool.ac.uk
Office: 0151 7946152

Hospital Leadership: The hospital and clinical operations are based in the SVS's four departments, and leadership is provided by the department heads listed above.

Standard 1.3: The VEE must have a strategic plan, which includes a SWOT analysis of its current activities, a list of objectives, and an operating plan with a timeframe and indicators for its implementation.

The Vision, Mission and Goal statements of the SVS are listed under Standard 1.1 above.

The SVS is currently engaged in an extensive strategic planning process, which is expected to generate a new plan in September 2022, in advance of the EAEVE site visit. The A summary of the current status of the plan is provided here, with the caveat that changes are certain over the coming weeks.

A summary of our SWOT analysis is presented here:

Strengths:

- **Strengths**
- Very strong National Student Survey scores (student satisfaction).
- Extensive clinical hospitals and ambulatory practices. This contributed significantly to the resilience of our teaching program during the pandemic.
- High performance in current UKRI REF (research) evaluation, ranking us the leading veterinary school in the UK.
- Student experience in BVSc program includes three years in a city environment integrated into a leading university, and two years in the intensive clinical environment of Leahurst.
- High performance of Veterinary Postgraduate Unit, which is one of the major providers of high quality continuing professional development for the veterinary profession in the UK.
- University provides an excellent research environment for exposure of veterinary students.
- High performance in One Health, with extensive opportunities for student experience.

Weaknesses:

- Leahurst Campus requires significant development and refurbishment.
- Recent reorganization of university structure, and incorporation of SVS into IVES has been challenging for staff.
- Centralized communications, marketing and philanthropy have limited capacity to support the needs of the SVS
- Central Professional Services slow HR and finance procedures.
- UoL has a limited understanding of how SVS operates, so it is sometimes overlooked.
- Development pathway for Teaching and Scholarship (T&S) academic staff are unclear.
- Inequitable teaching commitments of staff, with inadequate expansion of staffing to match class size increase and increased demands of new teaching modalities.

Opportunities:

- New funds have been centrally provided for investment in renovation and expansion of facilities at Leahurst over next 3 years. A longer-term plan for significant investment in Leahurst is under construction.
- A curricular review is beginning, with the objective of developing a new curriculum over the next 2-3 years.
- The SVS is pursuing AVMA-COE accreditation, which will increase opportunities for our graduates, and allow us to recruit additional high-quality students from overseas.
- We have been awarded new staff positions, which will not only address our teaching needs but also allow us to increase research capacity within the SVS.

Threats:

- Staff morale is low after a series of disruptive reorganizations to the university.
- We face severe competition from private practices for staff recruitment and retention.
- Historic under-investment in Leahurst campus.
- Increasing student numbers without matched investment (people or facilities)
- Limited funding for veterinary clinical research.
- Possibility of changes to UK Government funding of higher education.

Summary of the VEE Operating Plan with timeframe and indicators of achievement of its objectives

The operating plan, timeframe, and key performance indicators are currently being created and will be available for review at the site visit.

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 quality assurance, within their VEE. To achieve this, the VEE must develop and implement a strategy for the continuous enhancement of quality. 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.

Overarching educational policy and strategy

All Academic Programmes within the University of Liverpool fall under the University's "[Quality and Enhancement Framework](https://www.liverpool.ac.uk/aqsd/quality-and-enhancement-framework/)³". The framework specifies the responsibilities and processes by which the standards of the academic programmes and the quality of the student learning experience are managed, assured and enhanced.

The responsibility for implementation of the Framework in the SVS is ultimately the SVS Curriculum Board (see programme management above), which then reports to FHLS and University committees in turn for ratification. Faculty committees comprise representative membership from all Schools, including the SVS (and current chair is from the SVS), and are Faculty Scrutiny Panel and Faculty Academic Quality and Standards Committee (FAQSC). University committees are University Academic Quality and Standards Committee (AQSC) and University Approval Panel (UAP).

³ <https://www.liverpool.ac.uk/aqsd/quality-and-enhancement-framework/>

School of Veterinary Science culture of QA and quality enhancement

The Framework is embedded in all School of Veterinary Science (School) activities, including programme management and periodic review, annual monitoring of programmes, student involvement in quality assurance (QA), enhancement of learning, teaching and assessment, research and clinical service provision, as detailed below. These processes are used to monitor activity on both short- and long-term Plan-Do-Check-Adjust (PDCA) cycles, ensuring compliance with ESG standards (see Appendix 1.2, for detailed QA procedures). Oversight is from various committees within the SVS (see School committee structure diagram Appendix 1), with high-level oversight of School activities at FHLS and University levels.

Student involvement

Student Engagement is a core part of the QA processes of the VEE and comprises both student feedback and representation (Appendix 1.2.1). Student feedback is managed within the VEE via its “Internal Outcomes Assessment” structure whereby student can convey their feedback each semester and via less formal means such as the tutor system and the Dean’s “Town Halls” (See Standard 7.8 where this is detailed).

There is considerable student representation and input into University QA processes such as annual subject action plan and periodic review. Official reports are circulated to students via the Guild of Students and the Staff-Student Liaison Committee (SSLC) in order to ensure transparency. There are student representatives on the following committees: Undergraduate Board of Studies (three UG reps), Curriculum board (two UG reps), Recruitment, Admissions and Widening Participation Committee (2 UG reps), FAQSC (2 reps) and SP (2 reps). Appropriate student representatives are also appointed to working parties and sub-committees that review specific parts of the course, e.g. clinical training, extra-mural studies, e-learning and assessment etc.

Staff-Student Liaison Committee

An important forum where staff and students identify, discuss and address concerns, processes and enhancements to the academic, social and wellbeing programmes and resources within the school, based on student feedback. This committee is chaired by the Liverpool University Veterinary Society (LUVS) president and vice-presidents, and has two representatives from each year as well as a Student Voice Co-ordinator appointed by the University’s Guild of Students and follows the Code of Practice on Student Representation (Appendix 1.2.2).

Staff involvement

All of the committees and leadership roles are advertised for interest across all staff involved in teaching in the SVS. Core committees, such as the recruitment, admissions and widening participation committees, have defined terms of membership and regular recruitment.

Staff are also involved in internal and external periodic review with open staff meetings where all staff are invited to provide feedback. Staff are provided with internal and external outcomes assessment feedback both via circulation at the time of availability and provided on the internal Staff VLE page with the ability to feed back to the relevant year or subject lead.

Staff are also able to feedback to senior management via their Head of Department or to educational leadership either directly, or via established communication routes via their subject lead, year lead or academic administrator.

Cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms

The SVS conducts an annual review of teaching activities to generate an Annual Subject Action Plan (ASAP; Appendix 1.2.3), which is overseen by FAQSC and AQSC whilst, every 6 years, there is a student-focused Internal Periodic Review (IPR; Appendix 1.2) conducted by a nominated panel of university staff and external advisors.

Programme Monitoring

The BVSc Programme is reviewed and governed by the SVS Undergraduate Board of Studies and the SVS Curriculum Board (see Standard 1.2). The SVS QA processes are used to collate information from all assessments, as well as data from prospective students (admissions procedures), undergraduate students (surveys, focus groups, National Student Survey), external examiners (annual reports), recent graduates (outcomes assessment), employers (outcomes assessment) and school academic staff (PDR process, teaching assessment, peer observation of teaching). Data are discussed at relevant Veterinary Education committee meetings with recommendations for change then made. QA for any proposed changes is undertaken by the SVS Curriculum Board, overseen and ratified by the Faculty and University. Action plans are created which are regularly reviewed against the targets that are set (PDCA cycle). (See Appendix 1.2 for full details).

Where major changes are proposed, SP and FAQSC require programme revalidation including external review. The SVS has undergone programme revalidation in 2018 and 2019. Where changes to the programme Ordinance are required, this must be approved at all levels including University Senate and Council.

Use of internal and external outcomes to inform the programme

Outcomes and feedback are collected and assessed by the curriculum development group every year through feedback from students (internal outcomes assessment) as well as feedback from external stakeholders (external outcomes) such as alumni, employers and external examiners. Feedback also occurs both via the annual National Student Survey (for graduating final year students), and various professional accreditation bodies (EAEVE, RCVS, AVMA) review cycles.

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 ESEVT VEE's status and its last Self Evaluation Report and Visitation Report must be easily available for the public.

The SVS's informs its stakeholders and the public of its activities primarily through its website. Staff and Students in the SVS also have access to the SVS intranet where more sensitive information such as biosecurity and health and safety are located, and a dedicated virtual learning environment (VLE) for current non-public information such as timetables, minutes and programme policies.

The SVS shares its vision, objectives and strategic plan on the home page, with links to study opportunities, public facing information about our education, research, clinical facilitates, student life and how new external stakeholders can get involved with us. The SVS's accreditation status

and employment prospects are clearly visible on its website with a link to the self-evaluation report. The SVS's current ESEVT status can be found on the website [here](#)⁴.

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.

Any action planned or taken as a result of this data analysis must be communicated to all those concerned.

The Dean and Veterinary Senior Executive Team are responsible for developing and revising the SVS's mission and strategic plan. They provide oversight and monitor the activities, including having a reporting pathway, via the Head of Veterinary Education, from the SVS's Management and Strategic Committee structures (See Standard 1.2 and Education Committee Structures Appendix 1.1).

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 University of Liverpool was 19 - 23 November 2012 jointly with the RCVS, after which ECOVE granted full approval status in October 2013. After the SVS implemented a new curriculum from 2013, RCVS undertook a re-visitation in 2016. AVMA-COE undertook a pre-visit in 2019.

An internal periodic review (IPR) took place in April 2021 with a report being received in August 2021. The SVS formulating an Action Plan submitted in September 2021 and progress report in March 2022. Both the Action Plan and progress report were approved through the FHLS QA cycle.

The recommendations during the visit were:

1. The Faculty should develop and communicate a clear, focused and structured strategy for the Veterinary School, and support the Head of School and her senior management group to achieve this.

The new Dean of the VEE is leading a new strategic review currently and outcomes will be shared with the visitation team.

2. Clinical research, scholarship and career development of those inside the Veterinary School must continue to be a focus. Recruitment, retention and replacement of staff with veterinary expertise involved in teaching on the veterinary undergraduate programme must be monitored and protected. The Faculty of Learning and Teaching as well as the School of Veterinary Science must closely monitor the impact of the structural changes in the University on veterinary teaching and on the ability to attract veterinary qualified academic staff to participate in the School and in the veterinary teaching programme.

Staff retention has remained a challenge particularly in certain companion animal specialisations. A supplement above standard University salary is paid to attract and retain small animal clinical staff. The staff student ratio remains above the median indicator value and new posts have been

⁴ <https://www.liverpool.ac.uk/veterinary-science/education/accreditation/>

agreed to meet temporary increased student entry numbers due to higher awarded school examination results.

3. The School should make available for inspection the resource allocation model and service level agreements or similar, as soon as they are agreed.

This was made available to EAEVE. The current model is outlined in Area 2 below.

4. The University should ensure that support for veterinary clinical research within the Faculty and School is not eroded so that it can continue to be the cornerstone of veterinary undergraduate teaching, as well as contributing to the advancement of the profession.

In the latest reorganisation includes research directly in the VEE rather than via staff having associate membership of a separate research institute. This has been welcomed by staff. The recent UK Research Excellence Framework assessment rankings were very good. The Head of Research for the VEE has produced a research strategy that is integrated with Institute and Faculty strategies. This focusses on enabling clinical research.

5. The School should give priority to implementing the Student Experience Log as soon as this is available in order to integrate learning from EMS with the rest of the curriculum and ensure that tutors have an effective role in guiding students' learning from EMS. The School should ensure – either through the SEL or through other systems the School may develop to supplement it – that timely EMS assessments are captured and provide feedback to both students and EMS providers.

The system of EMS logging and reflection has been enhanced and is outlined in Standard 3.7 below.

6. The School must provide and effectively publicise to students a 24 hour per day contact number to be used in the event of emergencies that may occur during EMS placements, and provide this with other instructions relating to EMS.

Students are provided with an EMS handbook with guidance on what to do under a range of circumstances including the number for University Security manned 24 hours a day in case of emergency. This then cascades to senior VEE staff that then provide support.

7. The School must implement a programme of outcomes assessment, in line with best international practice in the sector.

Outcome assessment was improved and is described in 1.4 above.

Several recommendations were also made regarding management of the transition to a new curriculum. The new curriculum was successfully introduced and will be reviewed in the coming year. RCVS revisited in March 2016 to review the new curriculum and organisation and fully accredited the VEE at that time.

Comments on Area 1

The SVS has robust internal QA processes and has welcomed the RCVS' GDP surveys to monitor external outcomes since 2021 as these are designed to maximise response rate and have had an excellent employer response rate. Obtaining alumni outcome data at a later time (e.g. 3 years post-graduation) has been a challenge across the sector. The VSC are working to improve this.

We are developing a new strategic plan that will incorporate our SWOT analysis and help guide us in our pathway for continuous improvement in the future. A first draft will be available at the time of the EAEVE site visit.

Suggestions for improvement in Area 1

Increasing widening participation in the SVS remains an ongoing issue, but one which our recruitment team have been addressing. New initiatives such as a visit by Faith Leaders in May 2022, and review of our admissions processes, aimed at reducing some of the current barriers to entry, are ongoing.

We are seeking to improve student identity and cohesion by providing larger social learning spaces. This includes remodelling existing spaces such as our library, and repurposing of spaces both at Leahurst and Liverpool.

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).

Description of the global financial process of the VEE

Note: Exchange rate used throughout finance section is £1 to 0.8542 € as at 8/6/22

The SVS is well supported financially to sustain the BVSc programme and the mission of the School. The University works on a five-year planning, performance, and budgetary cycle. For the SVS this planning is led by the Dean and the IVES Head of Operations in consultation with VSET. Income flows to the area where it is generated and all the student income, both Government funding and student fee income, is allocated to the SVS. The clinical and diagnostic services, run as business plans provide income within the SVS overall budget. Each business plan is managed separately under the responsibility of the Head of Department and then quarterly meetings take place at SVS to review forecasts and confirm actual figures.

Capital planning and equipment replacement (above £25,000 /€29,267) is part of the same planning cycle. Capital plans are initially produced separately for each business plan and then put together to create an overall School plan which goes to the FHLS for approval.

There is an opportunity to review and adjust plans via in-year quarterly forecasts. Where changes are necessary, for example where additional students have been recruited or additional research income awarded, pay and non-pay expenditure can be adjusted in line with requirements. Forecasts are also carried out quarterly throughout the year for each business plan. Where something unexpected is required, for example the failure of a piece of equipment, then approval is obtained at FHLS level for expenditure not budgeted on plan.

University Estates Management are responsible for upkeep and maintenance of the estate and this is budgeted for centrally. In addition, opportunities may arise where the University capital plan allocates new additional resource. When new outside funds have been acquired for projects requiring either matched or additional funds, then the Dean can make a case to the FHLS for further capital resource. For example, the Equine Isolation Unit received a grant from the Leverhulme Trust matched by the University Capital Plan.

The SVS generates significant extra income through clinical and diagnostic services run as business plans. No set proportion of turnover from each business is required as a contribution to the University and business decisions are under the control of the Dean and the VSET. This allows flexibility for the SVS whereby the Dean can decide to allow an individual business plan to run at a loss in order to support student teaching.

% of margin paid as overhead to the official authority overseeing the VEE on revenues from services and research grants

The forecast surplus on the overall budget is set as the contribution to the University. The required contribution to the University is set at the SVS level through negotiation with the FHLS on an annual basis, allowing the SVS the flexibility to manage the business plans strategically.

	2021	2020	2019	Mean
Percentage margin of all income over expenditure paid to the official authority overseeing the VEE	30%	25%	28%	28%

Annual tuition fee for national and international students

Home UK students pay tuition fees of £9,250 (€10,829) per year, and international students pay £34,550 (€40,447). Additional government funds for UK students are awarded through band A fees with the per capita allocation decided after the governments annual spending review. This allocation is the same across England for veterinary, medical and dental students, and is currently £10,000 (€11,707) per year.

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

Financial Year: 1st Aug - 31st July. Financial data for 2021-2022 will be available at the site visit.

<i>Area of Expenditure</i>	<i>2020-2021</i>	<i>2019-2020</i>	<i>2018-2019</i>	<i>Mean</i>
<i>Personnel</i>	€ 18,570,117	€ 17,229,337	€ 17,106,522	€ 17,635,325
<i>Operating Costs</i>	€ 7,306,030	€ 8,909,617	€ 8,011,573	€ 8,075,740
<i>Maintenance Costs</i>	€ 741,430	€ 656,551	€ 457,108	€ 618,363
<i>Equipment</i>	€ 527,326	€ 723,392	€ 1,141,395	€ 797,371
<i>Total Expenditure</i>	€ 27,144,903	€ 27,518,897	€ 26,716,598	€ 27,126,799

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

<i>Revenue Sources</i>	<i>2020-2021</i>	<i>2019-2020</i>	<i>2018-2019</i>	<i>Mean</i>
<i>Public Authorities</i>	€ 9,123,439	€ 9,177,912	€ 9,586,896	€ 9,296,082
<i>Tuition Fees</i>	€ 9,831,479	€ 8,639,426	€ 8,697,584	€ 9,056,163
<i>Clinical Services</i>	€ 13,797,859	€ 11,716,919	€ 13,049,223	€ 12,854,667
<i>Diagnostic Services</i>	€ 277,716	€ 290,049	€ 382,879	€ 316,882
<i>Other Services</i>	€ 316,774	€ 184,683	€ 127,767	€ 209,741
<i>Research Grants</i>	€ 2,439,844	€ 4,015,257	€ 2,720,035	€ 3,058,379
<i>Continuing Education</i>	€ 2,434,350	€ 2,141,702	€ 2,028,400	€ 2,201,484
<i>Donations</i>	€ 85,396	€ 147,120	€ 41,388	€ 91,301
<i>Other Sources:</i>	€ 422,408	€ 395,635	€ 501,624	€ 439,889
<i>Total Income</i>	€ 38,729,265	€ 36,708,703	€ 37,135,7967	€ 37,524,588

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

<i>Academic year</i>	<i>Total expenditures</i>	<i>Total revenues</i>	<i>Balance</i>
2020-2021	€ 27,144,903	€ 38,729,266	€ 11,584,362
2019-2020	€ 27,518,897	€ 36,708,703	€ 9,189,806
2018-2019	€ 26,716,598	€ 37,135,79	€ 10,419,199

Estimation of the utilities (e.g. water, electricity, gas, fuel) and other expenditures directly paid by the official authority and not included in the expenditure tables

<i>Estimation of Utilities</i>	<i>2020-2021</i>	<i>2019-2020</i>	<i>2018-2019</i>
<i>Electricity</i>	€ 572,581	€ 476,041	€ 479,832
<i>Gas</i>	€ 185,239	€ 171,729	€ 165,769
<i>Water</i>	€ 68,026	€ 96,277	€ 88,301
<i>Sewage</i>	€ 30,308	€ 43,657	€ 34,104
<i>Total</i>	€ 856,155	€ 787,704	€ 768,006

Standard 2.2: Clinical and field services must function as instructional resources. Instructional integrity of these resources must take priority over 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 business plans for each hospital and field service are managed by the department in which it is embedded. There is a quarterly review at the level of the VEE.

Degree of autonomy of the VEE on the financial process

The SVS is principally funded by the combination of income from the tuition fees of BVSc students, and the UK Office for Students Band A funding provided to support the education of these students. Additional income is generated from courses operated by the Veterinary Postgraduate Unit. The SVS also operates clinical and diagnostic services, and two farms which are run as individual business plans. The funds generated by these businesses offset the cost of teaching and research done in these units and are also under the control of the SVS. Research at UK universities is funded by Research England, which is part of the UK Research and Innovation organisation, and funding is distributed to the SVS from funds available to the FHLS and IVES. Philanthropic gifts can also be used for support of programs, with consideration of donor intent.

The SVS plans for expenditure of these funds is managed through a five-year planning cycle, which is revisited annually, and approved by the Faculty Leadership Team (FLT) and the University SLT. Expenditures approved by this planning cycle are referred to as “in plan”. This process forecasts what the SVS’s contribution to the university will be in absolute terms and as a percentage of income. The balance of income over the contribution is managed by the SVS, subject to approval for new senior positions (senior lecturer or above) and major capital expenditures that are in excess of the anticipated plan; i.e., “out of plan”. Approval is at the level of the FLT.

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

List of the ongoing and planned major investments for developing, improving and/or refurbishing facilities and equipment, and origin of the funding

The following plans are all funded from the central university.

- A major renovation and extension of the changing facilities for entry and egress to the post mortem room at Leahurst.
- New permanent teaching spaces for clinical skills training, and for directed study for Years 1-3 on the Liverpool campus have been identified and are being remodelled accordingly.
- A program of renovation and reinvestment in the Leahurst campus is underway, with a budget of £2M (€2.34M) per annum for the next three years.

- A major master planning project is being undertaken for the Leahurst campus with the intention of determining the medium and long term steps needed to develop the site, and make it a hub for the University of Liverpool.

Prospected expenditures and revenues for the next 3 academic years

	Prospected expenditures and revenues for the next 3 academic years	2022-2023	2023- 2024	2024- 2025
Income	<i>Tuition Fees and Education Contracts</i>	€12,611,5878	€13,312,951	€14,546,565.
	<i>Funding Body Grants</i>	€ 7,480,074	€ 7,480,074	€ 7,480,074
	<i>Other Income</i>	€14,744,406	€14,979,579	€15,148,307
	<i>Research Grants and Contracts</i>	€ 6,706,695	€ 6,874,363	€ 7,046,222
	<i>Donations and Endowments</i>	€ 3,704	€ 3,704	€ 1,171
	<i>Investment Income</i>	€ 115,725	€ 115,725	€ 115,725
Income Total		€41,662,193	€42,766,397	€44,338,065
Expenditure	<i>Staff Costs</i>	€21,764,041	€22,889,993	€23,413,124
	<i>Other Operating Expenses</i>	€ 9,923,292	€10,107,129	€10,431,059
	<i>Depreciation and Amortisation</i>	€ 407,487	€ 686,839	€ 1,319,339
Expenditure Total		€32,094,820	€33,683,961	€35,163,521
Balance		€ 9,567,373	€ 9,082,437	€ 9,174,543

Financial planning for the SVS is done at VSET, and information is communicated throughout the SVS through Dean’s “Town Halls”, department meetings and committees.

Comments on Area 2

There is concern that the Office for Students funding is not increasing in response to changes in inflation, and might decrease if additional Band A funded students are recruited nationally (veterinary, medical and dental students). Inflationary pressures are also impacting our financial sustainability, particularly salaries, and it is increasingly difficult to recruit and retain staff in competition with the private sector. The cost of EPT placements is significant, and is born principally by the students, and the VEE.

The new RCVS standards requiring a high proportion of clinical case work to be delivered in a general practice context, which may require adjustments to our portfolio of clinical training opportunities.

Suggestions for improvement in Area 2

Additional funding from the government is needed to mitigate the impact of inflation, salary shortfalls, and to properly support EPT placements.

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 Annex 2. This concerns Basic Sciences, Clinical Sciences in companion animals (including equine and exotic pets), Clinical Sciences in food-producing animals (including Animal Production and Herd Health Management), Food Safety and Quality, and Professional Knowledge.

The overall objectives of the programme are to produce veterinary graduates who are confident scientists, practitioners, scholars and professionals who are aware of their roles and responsibilities within society. The BVSc course is a five-year, non-modular spirally integrated programme that enables graduates to apply to RCVS for professional registration as a veterinary surgeon.

The curriculum aims to deliver the standards defined in the UK Quality Assurance Agency for Higher Education (QAA) Subject Benchmark Statement for Veterinary Science, by achievement of the aims listed below:

1. To provide students with an opportunity to develop the skills, knowledge and confidence necessary to practise as a veterinary scientist and/or clinician, meeting the requirements of appropriate professional regulatory bodies (e.g. EAEVE, RCVS, AVMA-COE).
2. To enable the development of skills necessary for practising effective communication, teamwork, lifelong learning, research and evidence-based veterinary medicine.
3. To produce graduates who are professional and competent veterinary surgeons aware of their ethical responsibilities to animals, clients, employers and wider society.

These aims are met through the programme outcomes (see Standard 3.3).

The education of veterinary students in the UK is subject to both UK legislation, e.g. The Veterinary Surgeons Act 1966 and the European Directive 2005/36/EC (as amended by directive 2013/55/EU) and its Annex V.4.1, as transposed into UK law, which sets out minimum training standards for all European veterinary surgeons. The programme is structured to meet the high academic standards required by the University of Liverpool for a Bachelor's degree and the QAA - Code of Practice for the Assurance of Academic Quality and Standards in Higher Education, Framework for Higher Education Qualifications in England Wales and Northern Ireland (2008). The main focus is to fulfil the 'Day One' competences required by EAEVE and RCVS.

Curriculum review and development is managed by the VEE within this framework see Standard 1.2, Appendix 1.1 and Standard 1.4.

Each subject area is assigned to a member of staff for oversight (Subject Lead). The subject lead is the primary contact and in liaison with that subject's teachers. If an issue is identified it is reported at the relevant undergraduate education committee (UEC). There are 3 such committees with responsibility for different years of the curriculum, namely:

- Pre-clinical UEC – Years 1-2
- Para-clinical UEC – Years 3 and Year 4 (Semester 1)
- Clinical UEC – Year 4 (Semester 2) and Year 5

The chair of the relevant committee then reports to the programme over-arching committee, the Board of Studies. Board of Studies then decide on how the issue should be resolved. Simple issues are resolved at that board, but more complex issues that may have knock-on effects, are referred to Curriculum Development Group (CDG). CDG has oversight of the granular aspects of the entire

course (e.g. teaching sessions, timetable, curriculum mapping), and will propose an encompassing plan to address that issue, which is then sent back to Board of Studies for ratification or escalation to Curriculum Board as required. Both Board of Studies and Curriculum Board have student representation (Standard 1.2, Appendix 1.1).

Proposed curriculum change must be submitted to Curriculum Board to determine if it constitutes an administrative, minor or major change to the programme. Administrative changes can be approved locally at Curriculum Board. Minor and major changes need FHLS approval (SP and FAQSC). Major changes include changes to learning outcomes and/or changes to assessment (see also Standard 1.4).

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

	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
Academic Years	Lectures	Seminars	Self-learning	Laboratory / Desk	Non-clinical animal	Clinical Animal	Other*	Total
<i>Year 1</i>	258	42	290	79	104		320	1093
<i>Year 2</i>	233	37	296	62	98		320	1046
<i>Year 3</i>	287	13	268	98	90	7	320	1083
<i>Year 4</i>	290	70	135	112	59.5	224.5	320	1211
<i>Year 5</i>	3	141	65	51	82	578	240	1160
TOTALS	1071	303	1054	402	433.5	809.5	1520	5593

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (specify); H: total

* = Mandatory EPT (EMS) selected by student under RCVS rules. Hours distributed as typical of student choice.

The above table consists of ALL hours that a student needs to graduate, including private study (self-learning) for completion of continuous assessment tasks.

Table 3.1.2. Curriculum hours taken by each student

	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
<i>Subjects</i>	Lectures	Seminars	Self-learning	Laboratory / Desk	Non-clinical animal	Clinical Animal	Other*	Total
BASIC SUBJECTS								
<i>Medical Physics</i>	These subjects are entrance requirements and must be completed prior to starting the course, therefore they are not taught within the curriculum.							0
<i>Chemistry</i>								0
<i>Animal Biology</i>								0
<i>Plant Biology</i>								0
<i>Biomedical Statistics</i>								0
SPECIFIC VETERINARY SUBJECTS								
<i>Support</i>	20	10	822					852
Basic Sciences								
<i>Anatomy, histology, embryology</i>	60			37	77			174
<i>Physiology</i>	91	8	4	23				126
<i>Biochemistry</i>	8							8

<i>General & molecular genetics</i>	4		4	5					13
<i>Pharmacology, pharmacy, pharmacotherapy</i>	41	3	4						48
<i>Pathology</i>	72					32			104
<i>Toxicology</i>	3.8								3.8
<i>Parasitology</i>	50.5	3		14.75		1.9			70.15
<i>Microbiology</i>	51.55		2	5					58.55
<i>Immunology</i>	15		1	6					22
<i>Epidemiology</i>	14	4	21	9					48
<i>Information literacy / Data management</i>	10			92					102
<i>Professional ethics / Communication</i>	3	10		10					23
<i>Animal health economics / Practice management</i>	14	20	11	12					57
<i>Animal ethology</i>	15			10					25
<i>Animal welfare</i>	15					18	7		40
<i>Animal nutrition</i>	23					1			24
<i>Clinical Sciences</i>									
<i>Obstetrics / Reproduction</i>	26	11	4			7	18.5		66.5
<i>Diagnostic pathology</i>	16	12	11	19		26	9.5		93.5
<i>Medicine</i>	238.3	26	32	57		14.5	139		506.8
<i>Surgery</i>	43.5	20	12	3		10	139		227.5
<i>Anaesthesiology</i>	21	7	11			6	78		123
<i>Clinical practical training</i>	5	43	32	19		160	208	1040	1507
<i>Preventive medicine</i>	1	6	3	4		6	17		37
<i>Diagnostic imaging</i>	11	22	12			13	48		106
<i>Therapeutics</i>	16	4	10	10			20		60
<i>Propaedeutics</i>	8	30	21			22	15		96
<i>Animal Production</i>									
<i>Animal production / Breeding / Husbandry / Economics</i>	93	3	12	1		4	6	480	599
<i>Herd health management</i>	1	1	2			4	19		27
<i>Food safety and quality, Veterinary public health and One health concept</i>									
<i>Veterinary legislation</i>	23.85	6	8	17		1	30.5		86.35

<i>Control of food, feed, by-products</i>	15.7	45	2	23.25	7	16		108.95
<i>Zoonoses</i>	20.1	3	7.5	8	10.1	29.5		78.2
<i>Food hygiene / Food microbiology</i>	17.7	5	3.5	15	12	9.5		62.7
<i>Food technology</i>	3	1	2	2	1			9
TOTALS	1071	303	1054	402	433.5	809.5	1520	5593

Please note: An additional subject area has been added, namely “Support”. These are sessions that prepare the students for the transition from school-type learning to higher education-type learning, and include sessions such as managing workload & resources, preparing for exams etc. Included with these hours are timetabled private study hours (self-learning) for the completion of continuous assessment tasks.

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk-based work, E: non-clinical animal work; F: clinical animal work; G: others (specify); H: total

* = Mandatory EPT (EMS) selected by student under RCVS rules. Hours distributed as typical of student choice

Please note: An additional subject area has been added, namely “Support”. These are sessions that prepare the students for the transition from school-type learning to higher education-type learning, and include sessions such as managing workload & resources, preparing for exams etc.

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

<i>Types</i>	<i>List of practical rotations (Disciplines / Species)</i>	<i>Duration (weeks)</i>	<i>Year of programme</i>
<i>Intra-mural clinics (VTH)</i>	Equine Clinical Skills	1	4 or 5
	Equine Anaesthesia	1	4 or 5
	Equine Medicine	1	4 or 5
	Equine Orthopaedics	1	4 or 5
	Equine Out of Hours / Emergency	1	4 or 5
	Equine Soft tissue surgery	1	4 or 5
	Equine Surgery, lameness & imaging	1	4 or 5
	Livestock Clinical skills	1	4 or 5
	Livestock Lameness	1	4 or 5
	Livestock Reproduction	1	4 or 5
	Small animal Anaesthesia	1	4 or 5
	Small animal Cardiology	1	4 or 5
	Small animal Dermatology	1	4 or 5
	Small animal Imaging	1	4 or 5
	Small animal Medicine	1	4 or 5
	Small animal Neurology / Out of Hours	1	4 or 5
	Small animal Oncology	0.6	4 or 5
	Small animal Orthopaedics / Out of Hours	1	4 or 5
	Small animal Soft tissue surgery / surgical skills	1	4 or 5
	Small animal Exotic species	1	4 or 5
Small animal Practice	1	4 or 5	

<i>EyeVet clinic</i>	Small animal Ophthalmology	0.4	4 or 5
<i>Ambulatory clinics</i>	Equine Practice	1	4 or 5
	Livestock Practice	1	4 or 5
<i>Herd health management</i>	Livestock Beef & Sheep	1	4 or 5
	Livestock Dairy cattle	1	4 or 5
	Livestock Herd monitoring	1	4 or 5
	Livestock Young stock	1	4 or 5
<i>FSQ & VPH</i>	Public Health	1	4 or 5
<i>Electives</i>	A range of intra-mural or external options	3	5
<i>Other</i>	Diagnostic Pathology (all species)	1	4 or 5
	Livestock Disease investigation	1	4 or 5
TOTAL		33	

Table 3.1.4. Curriculum hours taken as electives for each student

	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>
	Lectures	Seminars	Self-learning	Laboratory / Desk	Non-clinical animal	Clinical animal	Other	Total
<i>Electives</i>								
<i>Basic Sciences</i>	10	16	24	70				120
<i>Clinical Sciences</i>	6	20	16	6	2	70		120
<i>Animal Production</i>		32	28	12	12	36		120
<i>Food safety and quality, Veterinary public health and One health concept - no Elective</i>								

Please note: During a 3-week Elective period students can choose an intra-mural or extra-mural study. The figures above show typical hours for each of the main types of intra-mural elective.

A: lectures; *B*: seminars; *C*: supervised self-learning; *D*: laboratory and desk based work, *E*: non-clinical animal work; *F*: clinical animal work; *G*: others (specify); *H*: hours to be taken by each student per subject group

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

There are no optional courses.

There are no optional courses within the 5-year BVSc programme other than the three-week Elective which we define as not optional as all students must take an elective, but there is choice as to the area. However, students can “intercalate” i.e. take a year away to do additional optional courses. Typically, 10 students per year undertake this option. This usually occurs after year 3 of the BVSc programme and can include:

- A year in China, where students visit our sister campus in China to learn the Chinese language and culture.
- BSc Conservation medicine, where students learn about conservation of animals in the wild.

- The third year of any BSc honours programme, provided the students meet the requirements to enter into that third year. This usually consists of animal / science-related programmes, but technically any subject area is possible.

In addition, students can also undertake some of their clinical rotations at one of our partner institutions in Europe. The exit of Britain from the European Union has made the funding for this more complicated but we are working on ways to overcome this obstacle and 7 students were still able to take placements abroad in 2021-22 and we anticipate numbers to increase in future.

Core clinical exercises/practicals/seminars prior to the start of the clinical rotations

Delivery of core clinical material (exercises/practicals/seminars) starts in year 1 with the ‘Clinical Skills’ course. Every student in years 1 to 3 has two timetabled hours per week to develop generic clinical skills in the following areas in small groups of 4-5 students.

Clinical skills development is further supported by consolidation sessions (small groups of 2-3 students), clinical examination practicals, communication and professional skills and case-based learning and together these form a core clinical development structure embedded within the curriculum. The clinical development is revisited and extended each year as part of the spiral designed curriculum. Technical staff from the SVS are responsible for supporting both clinical skills and consolidation sessions ensuring materials are displayed, the area is cleared/cleaned and resources are managed.

Students in years 1 and 3 visit the Leahurst campus for regular (weekly during semester 1) animal handling and clinical examination classes using the live animals at Leahurst. Transport is provided.

- Year 1
 - Clinical Skills: Animal handling, asepsis, assisted parturition, basic laboratory skills, cardio-pulmonary resuscitation, drug doses & administration, radiographic positioning and interpretation and surgical instruments & knot tying.
 - Case-based learning (CBL scenarios)
 - Communication skills (history taking)
- Year 2
 - Clinical Skills: Physical examination, Asepsis, suturing, bandaging, dental prophylaxis, intravenous fluid therapy and anaesthetic breathing systems, ophthalmoscopy and otoscopy, cytology
 - Case-based learning (CBL scenarios)
 - Scenario based communication
- Year 3
 - Anaesthetic equipment, basic physical exam, carnivore dentistry, cytology, herbivore dentistry, ligation & neutering, ophthalmoscopy & otoscopy and suturing.
 - Interactive Case-based learning – situational
 - Scenario based communication – the difficult conversation/situation
 - Clinical examination practicals
- Year 4
 - Interactive Case-based learning – situational

Immediately prior to the start of clinical rotations students undertake a week of ‘Preparation for Rotations’ which includes:

- Overview and orientation of the Leahurst campus, including the hospitals
- How rotations are assessed
- Overview of LiftUpp (see later)
- How to make use of feedback (‘Am I “Feedback Literate”’)
- Biosecurity and Health & Safety in the hospitals and farms
- Safe handling of animals

The development of practical clinical skills in the above areas is underpinned by the ‘Management of Disease’ course which runs during Year 3 (Clinical Application) and the first semester of Year 4 (Clinical Theory). (Appendix 3.1).

Core clinical rotations and emergency services (both intramural VTH and ambulatory clinics) and the direct involvement of undergraduate students in it

A description of each of the core clinical rotations and the timetable are listed in Appendices 3.2 and 3.3: There are 30 weeks of clinical rotations divided across the three areas of equine, small and production animals. Veterinary public health is incorporated into the production animal weeks and diagnostic pathology and microbiology in the equine weeks.

Each rotation consists of a group of 5-6 students in week blocks of teaching. Students are informed of requirements such as preparation, clothing and PPE in the rotation guidance available on the online VLE. Rotations provide case-based clinical training with a focus on development of day one competencies and skills in each area. Students take part in all aspects of animal care from history taking to discharge and are involved in working with all members of the veterinary team including technicians, registered veterinary nurses, farriers/foot trimmers and our in-house veterinary physiotherapist.

All of the rotation teaching, except ophthalmology (2 days) is provided by VEE owned hospitals, farms and practices, or by VEE staff visiting commercial premises such as abattoirs and herd health visits.

Teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin

Students visit a red meat or a poultry abattoir once during the VPH rotation week with VEE academic staff. Following the end of official Covid-19 related restrictions, we have access to two large chicken abattoirs (throughput 70,000 and 180,000 per day), and one large red meat (beef (300), pigs (5,000), sheep 2,000 per day)) abattoir. Abattoir visits are complemented with a Virtual abattoir platform (web-based learning tool and 3D 360-degree immersive videos using virtual headsets).

Once in the abattoir, students follow the process of meat production from animals being received in the lairage, through the slaughter process, chilling, meat cutting, packaging, and by-products handling and removal. Students perform mock ante-mortem inspection and Food Chain Information analysis with the help of the academic staff and official veterinarian (OV) present on site. Students discuss with an OV their daily tasks and duties. Students then observe and discuss the whole process for a few hours with the lecturer. The main topics students cover in the discussions with the lecturer and OV are: verification of Food Business Operator (FBO) regulatory compliance, daily audits, ante-mortem inspection, testing and surveillance, post-mortem inspection and health marking, official controls pre-requisites and HACCP (including controls and interventions), microbiology testing, by-products and specific risk material (SRM) handling and removal, main hazards and contamination sources, occupational health and safety, biosecurity and hygiene practices, food technology (interventions, chilling, packaging).

Selection procedures of the Electives by the students and the degree of freedom in their choice

After advertising the electives options with a description of the electives' activities, students are asked to provide their top 5 choices. Allocation is then based on the availability for each elective. If too many students apply for a specific elective, they are allocated their second or third choice. We are usually able to allocate the majority of the students to their first or second choice.

Procedures used to ascertain the achievement of each core practical/clinical activity

For pre-clinical activities, attendance is monitored for all compulsory sessions (everything other than lectures). If a student misses any compulsory sessions they are initially contacted by e-mail and advised to catch up any missed sessions via available resources in liaison with the relevant teacher. If a pattern of non-attendance is observed the student is summoned to a meeting with the

year lead and senior tutor for their year. At this meeting any support issues are identified and a catch-up plan is drawn up.

Clinical skills activities in years 1-3 are recorded in a reflective logbook that is reviewed each Semester by the academic staff. This logbook is designed so that the student keeps a record of their clinical skills and reflects on further development of these skills.

EPT is monitored by the 'Extra Mural Studies' (EMS) office. Students devise their own EPT programme (see Standard 3.5) and log the placements they plan on attending via the EMS database. In advance of the placement students are expected to create a list of learning outcomes for that placement. After the placement they are expected to reflect on that placement and devise a plan for further development. This is recorded in an EMS logbook (Students can use their own logbooks or complete this information in the EMS section of an online portfolio). The student must also return a completed feedback form from the placement provider to confirm attendance and use it for further development. EPT logbooks are reviewed once per semester with the student's personal tutor (A member of academic staff who advises a small group of up to 10 students; see Standard 7.7).

Clinical activities are recorded in online development software (LiftUpp). After each clinical activity the supervising member of staff records feedback indicating the level of development related to the competence category within LiftUpp, and specifically notes observed tasks completed or skills achieved. A full list of tasks/skills assessors might observe can be found in Appendix 3.4. Students use this feedback for further development. After each block of rotations (5 weeks) the activities for that block are reviewed by a panel of 7 staff (subject leads from Equine, Small and Production Animal, the LiftUpp lead, Programme Director, Assessment lead, technical and administration support staff) to determine if the students' development of activities is at the appropriate level. If the panel decides it is not at the appropriate level, that student will be required to repeat relevant activities, via a tailored repeat rotation week that is devised by the relevant clinical staff to allow development of the individual student's weak areas. As well as recording of clinical development using LiftUpp, students are assessed undertaking 19 directly observed procedures (Practical Clinical Assessments, PCAs) during specific rotation weeks (Appendix 3.5 and Standard 8.2).

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 an academic 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 self-learning and lifelong learning.

Study Programme

As outlined in 3.1 and 3.2 above, the main focus of the VEE's programme is to fulfil the 'Day One' competences required by the ESEVT and RCVS. The programme specifications (Appendix 3.1) specify the qualification (Target Award, p.1) and refer to the national qualifications framework (QAA Subject Benchmark, p.3) and reference points of

- European Association of Establishments for Veterinary Education (EAEVE)
- American Veterinary Medical Association - Council on Education (AVMA-COE)
- FHEQ QAA Framework for Higher Education Qualifications (FHEQ)

QA Processes

As well as SVS QA processes the veterinary programme is quality assured at FHLS and University level (Standard 1.2 and 1.4, Appendix 1.2 and 1.3).

Academic environment conducive to learning, self-learning and life-long learning

As well as meeting external programme specific regulatory bodies (e.g. EAEVE, RCVS, AVMA), the programme must be designed and delivered to meet the core University strategic educational objectives (Liverpool Curriculum Framework⁵). These are based on 7 core principles:

- Inclusivity
- Research-connected teaching
- Active learning
- Authentic assessment
- Confidence
- Digital fluency
- Global citizenship

A key aspect of the above is independent lifelong learning. Students arriving in year 1 are used to a dependent teacher-centred approach to learning. To support the transition to independent student-centred learning, a 'Study' skills course has been developed (labelled as 'Support' in the teaching hours above).

⁵ <https://www.liverpool.ac.uk/media/livacuk/centre-for-innovation-in-education/liverpool-curriculum-framework/liverpool-curriculum-framework-booklet.pdf>
<https://www.liverpool.ac.uk/media/livacuk/centre-for-innovation-in-education/liverpool-curriculum-framework/liverpool-curriculum-framework-booklet.pdf>

Lifelong learning is then promoted and encouraged throughout the rest of the programme via the online portfolio and the personal tutoring system. At a minimum, students must complete a reflection of their development once per semester and this is reviewed in a meeting with their personal tutor (Personal Development Planning).

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.**

The programme learning outcomes (see also Appendix 3.1 pp.7 – 9, mapping pp.10-13) are:

Underpinning knowledge, clinical and study skills:

These major learning outcomes enable students to demonstrate underpinning knowledge, clinical and study skills.

- Describe basic concepts in veterinary science
- Develop and practise basic clinical and professional skills
- Discuss more advanced concepts in veterinary science
- Explain fundamental disease processes
- Apply fundamental veterinary science concepts in complex situations
- Describe fundamental concepts of disease management
- Refine clinical and professional skills
- Use more complex aspects of disease management and evidence-based veterinary medicine to solve clinical problems
- Evaluate and refine knowledge and skills in all aspects of clinical veterinary science
- Develop competence in interpersonal and professional skills

Professional attributes:

These major learning outcomes form the basis of the professional attributes of a day-one competent veterinary surgeon and should be met by the end of the course.

- Evaluate animals by gathering and interpreting oral, written and physical information
- Investigate and diagnose clinical problems in veterinary science
- Administer interventions and therapy to animals, including anaesthesia, surgery, drug therapy, fluid therapy, husbandry, nutrition, and prophylaxis
- Apply underpinning veterinary knowledge when practising veterinary science
- Communicate effectively with owners, veterinary colleagues, interprofessional colleagues, and the general public
- Work effectively as part of a team when practising veterinary science
- Create and maintain accurate clinical records, reports and documents
- Apply legal, professional and public health principles when practising veterinary science
- Apply ethical and welfare principles when practising veterinary science
- Apply financial and business skills when practising veterinary science

- Apply research, epidemiological, and evidence-based medicine principles when practising veterinary science
- Manage the veterinary environment effectively with reference to health & safety, radiation safety, and biosecurity
- Demonstrate and maintain professionalism with oneself and others
- Reflect on practice, and demonstrate the skills required for lifelong independent learning

Ensuring that the learning outcomes fit with the ESEVT Day One Competences

Each teaching session is associated with a set of learning outcomes aligned to the overall programme learning outcomes (Appendix 3.1.1). Each teaching session is associated with a set of learning objectives and these are being mapped in a database planned to be available as a live database for visitation October 2022.

The ‘Curriculum Development Group’ (CDG) are responsible for major review and re-design of the programme and this group forms a key part of the SVS strategy (Appendix 1.1.C.). The CDG receives input from internal and external outcomes (i.e. internal and external stakeholders) and Liverpool Veterinary Education Research Group. The process starts by review and re-design of the overall programme learning outcomes. These are then distributed to subject experts for them to revise the learning objectives for each of their teaching sessions. These learning objectives are then mapped to the various programme-specific regulating bodies’ day one competences (ESEVT, RCVS and AVMA-COE).

Once a programme has been designed and mapped, and quality assured by the FHLS and University via the SVS Curriculum Board (see Standard 1.2 and 1.4, Appendix 1.2 and 1.3), the programme is then implemented by the ‘Board of Studies’ and its associated ‘UEC’ – preclinical, paraclinical and clinical (SVS Management see Appendix 1.1.A and 1.1.B).

The CDG is also responsible for devising an overall assessment strategy that complies with University, ESEVT, RCVS and AVMA requirements.

Each UEC is chaired by a year lead who, along with subject leads, has overall responsibility for devising assessments in line with the assessment strategy. They are also responsible for blue-printing each assessment to the overall programme outcomes to ensure all subject areas are covered by the appropriate types of assessment.

Learning outcomes are communicated to the relevant staff and students via the committee structure, but more importantly, especially with regards to the students, via the VLE. Staff are also requested to state learning outcomes within each lecture. Learning outcomes are reviewed annually by the subject leads, and any issues / developments are reported the relevant UEC. Any revisions to learning outcomes are progressed via Curriculum Board, to approval at FAQSC. Major revisions to learning outcomes will trigger programme revalidation at FHLS level and this occurred in 2018 and 2019.

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 on going and periodic review of the curriculum at least every seven years by involving staff, students and stakeholders; these reviews must lead to continuous**

improvement. 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 described in Standard 1.2 and 1.4 The SVS follows the University of Liverpool's Academic Governance Structure as defined by its [Academic Standard and Quality Division⁶ Quality and Enhancement Framework⁷](#) Its official committee structure (Appendix 1.1.A.), is supported by the SVS and FHLS management (Appendix 1.1.B.) and is underpinned by the SVS Strategic committee structure (Appendix 1.1.C.).

The committee structure is directly linked to the SVS QA processes and involves students according to the Code of Practice on Student Representation ([Appendix 1.2.2](#)) as well as undergoes periodic review involving staff, students and stakeholders as outlined in Standard 1.4 and Appendices 1.2 and 1.3.

The core curriculum is decided, and communicated in a similar process to that for the learning outcomes (Standard 3.3). The process starts with CDG (Appendix 1.1.C.). When devising a completely new curriculum we involve a larger group of stakeholders than just the CDG committee (including internal and external outcomes committee and Liverpool Veterinary Education Research Group), consisting of multiple staff, students and alumni and potential employers.

Collectively the pedagogical aims of delivery will be debated and a feasibility study is performed to determine if sufficient resources (both infrastructure and learning resources) exist to deliver. A key aspect of this is determination of the feasibility of timetabling. Overall programme outcomes and assessment strategy are also determined at this stage.

Once overarching concepts and themes have been agreed upon, it is then passed to the Board of Studies and its relevant UEC for implementation, subject to FHLS and University approval (see above).

As outlined in Standard 1.4 and Appendices 1.2 and 1.3, a core principle of QA is the regular collection and analysis of feedback from various stakeholders. These include, but are not limited to:

- Student feedback on course delivery (via surveys conducted at the end of each Semester)
- National Student Survey data (an external survey conducted annually with final year students)
- Recent graduates and employers survey (an external survey conducted annually by the RCVS [recent graduates] and Veterinary Schools Council [3 year graduates])

There are two working groups that collate and analyse this data (internal surveys by the internal outcomes assessment group, and external surveys by the external outcomes assessment group). This data is then passed to Board of Studies. Potential programme changes are then approved at SVS level at Curriculum Board before being ratified at FHLS level via SP and FAQSC and then University level (See Standard 1.4).

Ongoing review performed continuously by Board of Studies / UECs, annual review at FHLS level (ASAP see Appendix 1.2) and periodic review (6 yearly; IPR; Appendix 1.2). Communication to all stakeholders is communicated to staff and students via the committee structure and the online VLE.

⁶ <https://www.liverpool.ac.uk/aqsd/>

⁷ <https://www.liverpool.ac.uk/aqsd/quality-and-enhancement-framework/>

Standard 3.5: External Practical Training (EPT) is compulsory training activities organised outside the VEE, the student being under the direct supervision of a non-academic person (e.g. a practitioner). EPT cannot replace the core intramural training nor the extramural training under the close supervision of academic staff (e.g. ambulatory clinics, herd health management, practical training in FSQ and VPH).

Since the veterinary degree is a professional qualification with Day One Competences, EPT must complement and strengthen the academic education inter alia by enhancing student's professional knowledge.

The Royal College of Veterinary Surgeons (RCVS) requires students to complete 38 weeks of EMS during the BVSc programme; 12 of the 38 weeks are animal husbandry EMS (AHEMS), while the remaining 26 weeks are clinical EMS (CEMS). Students may carry out more than the minimum amount of either type of EMS if they wish and are able to. All EMS must be carried out during published University vacations i.e. not during term time weekends, days or evenings.

Learning on EMS placements is experiential, focused on the student understanding and applying knowledge and skills from core teaching in a range of situations. This learning complements the training they have already received within the VEE helping them develop into a capable and confident veterinary surgeon. EMS also represents the beginning of a process of continuing professional development which will continue throughout their career.

AHEMS takes place during the first 2 years of the BVSc programme and allows students to gain further experience in animal husbandry and handling of all common domestic species. The RCVS stipulates that at least 1 week of AHEMS must take place in each of the main three disciplines (equine, production animal, and small animal). There is no requirement as to which individual species the placement should be centred around in each of these areas and these placements can take place in any order. First year students receive animal handling and lambing training, using a simulator, prior to their first vacation and lambing season. They can also begin to develop their professional skills with clients and animal owners.

CEMS placements take place in the last 3 years of the course and allow students to further develop their clinical, technical and professional skills. CEMS integrates with the clinically-oriented teaching in all parts of the programme during these years, but especially with the Disease Processes, Professional Skills and Management of Disease curricula. Unlike AHEMS there is no RCVS stipulation as to how many weeks are required for each species or placement type and students undertake CEMS in the areas that interest them, they feel may need further development or they feel will benefit them most. As the majority of graduates will enter clinical practice the RCVS expect students to gain as much experience in clinical areas as possible before graduation so CEMS must take place in placements where students are on-site getting "hands-on", direct clinical experience with animals with the following exceptions:

- Research placements of up to 6 weeks can count towards CEMS: these must be individually approved by the SVS CEMS coordinator.
- Students may carry out up to 2 weeks of "professional EMS" in a placement that is not necessarily clinically based or directly involving animals e.g.
 - Administrative placements with veterinary bodies and/or government
 - Veterinary business placements
 - Veterinary diagnostic laboratory placements
 - Veterinary Public Health placements
 - Named Veterinary Surgeon (research animal welfare) placements

If students wish to carry out a professional EMS placement somewhere other than the above (e.g. leadership, management or veterinary business focussed placements) or if they wish to carry out

more than 2 weeks of professional EMS because they have a specific interest in gaining further experience in a non-clinical setting these may be allowed at the SVS's discretion.

Table 3.5.1. Curriculum days of External Practical Training (EPT) for each student

<i>Fields of Practice</i>	<i>Minimum duration (weeks)</i>	<i>Year of programme</i>
<i>Production animals (pre-clinical)</i>	1 compulsory, up to 9 optional	1 and 2
<i>Companion animals (pre-clinical)</i>	1 compulsory for each of small animal and equine, up to 9 optional	1 and 2
<i>Production animals (clinical)</i>	No minimum duration, up to 26 weeks optional	3, 4 and 5
<i>Companion animals (clinical)</i>	No minimum duration, up to 26 weeks optional	3, 4 and 5
<i>Food Safety / Quality & Veterinary Public Health</i>	No minimum duration, up to 26 weeks optional	3, 4 and 5
<i>Others (specify)</i>	Up to 2 weeks "professional EMS" (see above)	3, 4 and 5

Standard 3.6: The EPT providers must have an agreement with the VEE and the student (in order to state 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 academic staff responsible for the overall supervision of the EPT, including liaison with EPT providers.

Student Agreement Forms (SAFs) are completed by each EMS provider. The SAF (Appendix 3.6) details requirements for health and safety, equality / diversity and inclusion, employers' liability insurance, working hours and feedback processes.

Name of the academic person(s) responsible for the supervision of the EPT activities

AHEMS: Dr Melanie Chapman BSc(Hons) BVSc MSc CertEd FHEA MRCVS

CEMS: Dr Alistair Freeman BVM&S PhD PGDAP DSAS(Soft Tissue) FHEA MRCVS

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.

Students involvement in the preparation, recording and assessment of their EPT

Prior to EMS placements beginning, students are taught and assessed on animal handling and husbandry and receive teaching on EMS health & safety, conduct and expectations. Students agree intended learning objectives with their personal tutor and the placement provider before the placement and reflect upon them afterwards using an EMS journal (see below): suggested EMS learning objectives are provided by the SVS for each year of the course and type of placement and published in the EMS Handbook (Appendix 3.7). Students find placements through a database of providers maintained by the SVS or through personal contacts or research. Placements are proposed through an online system that ensures that:

- A SAF is in place for the placement provider
- Students declare that they have received health and safety instruction and have appropriate personal liability insurance (and travel insurance for international placements).

At the end of the placement students discuss their progress with the provider who completes a feedback form on the student. This form is submitted to the SVS: on receipt the student's placement is logged as completed. Students can also submit feedback comments on the placement.

Students complete a reflective journal to record their EMS using an online system called PebblePad, recording relevant information about the placement and reflecting on what they observed as well as how well they met their learning outcomes. Students are given content guidelines for their EMS journal for both AHMS and CEMS. The journal is reviewed during students' Personal Development Plan meetings with their personal tutor each semester and, if required, by the EMS panel. The EMS panel meets at least yearly and interviews several students (randomly chosen, referred by their personal tutor or selected because of an unusual placement or pattern of placements, because they have failed to comply with the EMS regulations or if checks with placement providers reveal inadequate attendance and performance regarding their placements). Students are asked to provide evidence of their proposed learning outcomes and how they met them: if the panel concludes that one or more of the placements did not meet the desired learning outcomes or have not been properly documented the placement(s) will be disregarded and the student is required to repeat the placement(s).

Description of the complaint process in place concerning EPT

Students are provided with guidance on wellbeing while on placement and on what to do if they feel unsafe or frightened, are struggling with the physical demands of the placement or feel intimidated, bullied or harassed. In an emergency or outside normal working hours they are instructed to move to a safe location and contact University security by telephone for support: otherwise, issues can be reported online via the University's "Report and Support" service. Further support is available via personal tutors and the EMS coordinators who can signpost students to appropriate University support services.

Formal complaints about placements can be submitted via the EMS Office or direct to one of the EMS coordinators. Complaints are discussed within the EMS team: action taken depends upon the nature of the complaint e.g. farm animal welfare concerns are sent to our specialist Livestock and One Health department for discussion and advice while students making a complaint about a practicing veterinary surgeon are advised to contact the RCVS.

Comments on Area 3

We have a strong curriculum and QA processes with regular review and PDCA cycles of obtaining feedback on it from internal and external sources and adjusting as necessary. However, the curriculum has not had a major review since 2013-2016 when the new curriculum was implemented, and this process will be commencing again this Autumn.

Suggestions for improvement in Area 3

Some areas of the curriculum are limited due to staff recruitment e.g. Veterinary Public Health. A new member of staff will arrive in September 2022 and a further new post in the area has been agreed for recruitment. There is a One Health Focus within our parent Institute, IVES. We plan to further utilise the expertise across IVES e.g. by offering a One Health elective (supported by VPH staff).

External electives, such as in Africa, had been put on hold during COVID and the student treatment of dogs belonging to homeless people in the community "Trusty paws" was also on hold during COVID and is slow in re-starting. Plans are underway for better marketing and communication.

Area 4. Facilities and equipment

Standard 4.1: All aspects of the physical facilities must provide an environment conducive to learning, including internet access. The veterinary 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 with reduced mobility, and EU animal welfare and care standards.

The SVS of Veterinary Science is based on two campuses; the Liverpool campus in Liverpool city and the Leahurst campus, 19 kilometres miles away on the Wirral Peninsula. The Liverpool Campus hosts the majority of the first 3 years of the curriculum and staff and students are able to access the entire University of Liverpool facilities, including the full range of teaching, research, social, sporting and support facilities. The “Vet School Hub” located in the Thompson-Yates Building includes two social learning zones and a student facing reception where student experience administrators are available to support students and administration offices. The nearby Foresight Centre has two quiet study rooms (capacity 30 in each room) and a large central social learning zone (capacity 100) and a large kitchen area downstairs. There are two large clinical skills suites in the Waterhouse buildings adjacent to the Foresight social learning zone which will be newly fitted for teaching during the Autumn of 2022. A dedicated Veterinary Teaching Suite (VTS) is also close by. The first opinion small animal practice (UVP) is located on the Liverpool campus providing clinical rotation teaching in small animal general practice and exotics (maps - appendices 4.1, 4.2).

The [Leahurst campus](#) is the main site for teaching the final 2 years of the BVSc curriculum, during which time most students move to live locally in private accommodation on the rural Wirral Peninsula. The site covers an area of approximately 80 hectares and includes teaching, clinical service and research facilities, alongside associated administrative, and social facilities to support the students and staff. Facilities include Ness Heath Farm (beef, sheep and pigs), Wood Park Farm (Dairy), the equine and small animal teaching hospitals, Equine and Farm animal ambulatory clinics and associated farm animal clinical area. There are also associated diagnostic services (microbiology, diagnostic pathology, clinical pathology and post mortem). The facilities operate year-round to support the clinical rotation teaching (30 weeks), and elective study (3 weeks) and opportunity for extra-mural study (EPT) within the clinics for students from Liverpool and other veterinary schools.

Research takes place across both campuses with the main shared research infrastructure based in the Ronald Ross, William Henry Duncan and Liverpool Science Park buildings in Liverpool. Clinical research laboratories in Leahurst main building were refurbished in 2018/2019 and there is an ongoing review of development potential at the Leahurst campus (map – appendices 4.3, 4.4).

An external specialist ophthalmology veterinary practice (The EyeVet) 18 miles from Leahurst Campus provides 2 days of ophthalmology to every student in the clinical rotations in years 4 and 5 (map - appendix 4.5).

In addition to visiting farms who are clients of the Leahurst Farm Practice ambulatory clinic we have relationships with other farms 10-50 miles from the Leahurst Campus who have good quality farm health data to undertake regular week-long farm health assessments (map - appendix 4.6).

The VEE has arrangements with ten abattoirs, food processing and cheese making facilities to enable students on the VPH clinical rotation week to visit. These are 9-80 miles away and are visited in rotation depending on slaughter and manufacturing times (map - appendix 4.7).

Description of the strategy and programme for maintaining and upgrading the current facilities and equipment and/or acquiring new ones

The Central University Facilities, Residential and Commercial Services (FRCS) are responsible for maintaining and upgrading facilities. The Dean and Head of Operations site on a Leahurst Campus steering group to oversee projects and report to VSET. Major maintenance has traditionally been on an *ad hoc* basis but FRCS have allocated a budget of £2 million per year over the next three years for maintenance and refurbishment of the Leahurst campus site.

A Campus manager is based at Leahurst and each major building in the Liverpool campus has a building manager. Maintenance and repair work on Leahurst Campus and the farms is reported on-line and progress reviewed by senior SVS technical staff responsible for each area (Planon system). Problems are reported to HOO who has regular meetings with senior FRCS staff to review progress.

VSET or IMT can approve capital spend on equipment up to £25,000. Due to uncertainty regarding income during COVID all capital spend over £25,000 currently requires approval at FHLS level. There are also funding rounds where bids can be made for spend over £25,000 across the FHLS.

Description of how the VEE ensures that all physical facilities comply with all relevant legislation

Surveyors contracted by FRCS undertake annual building conditions surveys. An Institute Safety and Regulatory Compliance Co-ordinator is allocated to work with the VEE staff on each campus. They accompany the area Departmental Safety Coordinators on regular inspections of the site and report any buildings safety issues to the Heads of Department of the relevant area and Head of Operations via the Institute Technical Manager and to the Central Safety Advisors Office, who track compliance across the whole University. The SVS Dean chairs Leahurst Campus and SVS Health & Safety Committee where these reports are discussed and action decided.

All hospital and clinical practices are accredited by the RCVS Practice Standards Scheme and are inspected for legal compliance, including medicines storage regulations, under that scheme.

Standard 4.2: Lecture theatres, teaching laboratories, tutorial rooms, clinical facilities and other teaching spaces must be adequate in number, size and equipped for the instructional purposes and must be 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 academic and support staff.

On the Liverpool campus (years 1-3), the VEE has access to dedicated areas and shared facilities that are booked centrally according to the timetable:

Thompson Yates building museum area that forms the main entrance and public face of the SVS. Thompson Yates Student Learning Zone (capacity 50, 6 computers) for private study. The adjacent Foresight Centre has two quiet study rooms (capacity 30) and a large central social learning zone (capacity 100) and a very large kitchen area downstairs. There are two large clinical skills suites in the Waterhouse buildings adjacent to the Foresight social learning zone which will be newly fitted for teaching during Autumn of 2022. These suits together have a capacity for 80 students and can facilitate two year groups concurrently (Practical groups run with 1/6th of the year or 30 - 36 students).

Veterinary Teaching Suite (VTS) Dissection Room (capacity 150) for practical classes that can be divided. Each side is equipped with video cameras, PCs and visualizers for demonstrating via (32x) large LED screens and 30 each of light microscopes and dissecting microscopes. This arrangement allows flexible use of the Dissection Room for either “wet” practicals, (dissections,

etc.) or “dry” (demonstration, etc.) classes. This area is used for anatomy, pathology and veterinary public health practical classes.

Currently the VTS provides space for clinical skills teaching. This facility will be moved to new spaces in the nearby Waterhouse Building during the Autumn of 2022. At that time we will use the vacated VTS space to create consolidation areas for private study of anatomical specimens.

Preclinical and paraclinical practical classes are also delivered in the Life Sciences laboratories A-F, a resource shared across the FHLS. The laboratories are networked with AV equipment that allows them to be used individually or in any combination. The laboratories are all containment Level 2. There are 300 student microscopes and 24 dissection microscopes for anatomy, pathology, microbiology and parasitology teaching. Two microscopes with digital video camera, PCs and visualizers are used to demonstrate material.

University shared lecture theatres and rooms are used for other sessions and booked via a central booking system (Orbit) by Veterinary Education administration team.

Leahurst Campus teaching rooms

On the Leahurst campus (years 4-5) the learning environment comprises:

Leahurst Lecture Theatre (capacity 181) for didactic lectures

Social learning zone and common room (capacity 50) for private study and breaks between lectures

Student Laboratory (capacity 30) for dry practicals

Small animal clinical skills lab (capacity 8) for small animal clinical skills

Leahurst Library (capacity 20) for private study

Leahurst computer room (12 computers)

Henry Edwards Learning Centre (3 tutorial rooms + clinical skills lab)

Leahurst House (4 tutorial rooms)

Zoonosis Centre meeting room

Main building meeting room

Both teaching hospitals also have some small group teaching spaces for case discussions.

Pathology

The practices and hospitals are supported by diagnostic laboratory services providing veterinary pathology and microbiology diagnostics. The facilities include two post-mortem room, microbiology labs and a new digital morphology lab. The post-mortem room (80.0 m²) was refurbished in 2011 and will be accessed through a newly constructed changing facility by the end of 2022. This is used for large classes (up to 20 students) for third year necropsy practical classes (two groups of up to four students) and also for groups of up to 7 students on the Clinical Pathology and Disease Investigation rotation weeks. This room hosts 3 dissection tables including a large hydraulic heavy duty for large animals (up to 1500 Kg), a Category 2 microbiological safety cabinet and a band saw, whilst the small post-mortem room hosts two tables (for carcasses <50 Kg) and a diamond band saw and is used for small group teaching. Both post-mortem rooms are equipped with computers, AV and cameras to stream post-mortem examinations allowing a virtual experience if needed. Microbiology facilities host state of the art diagnostic equipment (Microflex LT/SH MALDI-MS System) where students benefit from exposure to real case diagnostics. The newly established DiMo (Digital Morphology) lab hosts a small multi-purpose microscope teaching room (5 seats) and workstations for image analysis, deep learning and 3D modelling which are used for student projects and to generate teaching material to be embedded in the VLE.

The clinical pathology laboratory, sited in the Wellcome building, between the Small Animal and Equine hospitals, contains a range of automated and manual analysis equipment including Siemens Advia 2021i haematology analyzer, Beckman coulter AU480 biochemical analyzer, Siemens

Immolute 2000XPI immunoassay system, ACL Top 300 – coagulation analyzer, 2 x Wescor Elitech Haematology Pro Automatic stainer/cytospin, Olympus DX46F - twin head microscope, 2 x Zeiss Axio Lab A1 microscopes with screens).

Clinical Facilities

The VEE owns and operates separate referral hospitals for small animals and horses and hospitalisation facilities for production animals on the Leahurst Campus. It also runs a first opinion small animal practice on the Liverpool Campus and ambulatory first opinion equine and production animal clinics from the Leahurst Campus. Details are given in standards 4.3 and 4.4.

Each species area has its own clinical skills area with models and manikins specific for the common clinical tasks in that species.

Facilities for study and self-learning; catering; locker rooms; on-call accommodation etc.

Liverpool campus has many University owned and commercial food outlets and group eating areas. In addition, the Thompson Yates and Foresight Centre houses student common room areas with hot and cold water and drinks vending machines.

First year students can apply for University owned accommodation on the Liverpool campus or Greenbank student village 3 miles from the campus and well served by public transport. This accommodation is available for years 2-3 of the programme but most students choose to live in private housing. There is a well-equipped University sports centre with swimming pool and gymnasium 5 mins walk from the buildings used by the VEE at the Liverpool campus open to all students and staff (<https://www.liverpool.ac.uk/sports/>). Greenbank student village has a gym and outside artificial sports pitches. There are university owned natural and synthetic sports pitches at Wyncote 6.5 km from the Liverpool campus. Students run many recreation and sporting clubs open to all students and veterinary students also run their own clubs using university facilities and compete in local leagues.

The Leahurst Campus has a café open 9—2.30 on weekdays with an eating area and staff and student common room. This houses a bar, run by students, that is open for specific occasions. There are drink and food vending machines in hospital areas and in the student social learning zone by the main lecture theatre available 24/7. Other areas have hot drink making facilities. Leahurst Campus has a floodlight grass lawn for recreation. Students and staff use a local, not for profit, recreation centre 2.5 kilometres away for communal sport, such as basketball. Many students are members of local gyms close to their private accommodation.

Locker rooms are available in the VTS to store personal belongings not allowed in the practical rooms. There are lockers in the Leahurst main building for use by 4th year students. Equine and Small Animal hospitals and Henry Edwards Learning Centre have lockers for students on clinical rotations. All buildings have toilets open to all staff and students. Shower facilities are available in VTS, each clinical area and the main post mortem room changing rooms.

There will be a newly refurbished (late 2022) building for equine out of hours rotation students. They work overnight and have three rooms to relax in when “on call” accommodate up to eleven people, three unisex WC’s, a shower and a common room with kitchen facilities, and a teaching/meeting room. The Small animal hospital has a self-contained unit consisting of kitchen/lounge common space, disabled-access unisex WC and shower, and four bedrooms. In-patient care of farm animals is shared between 2 of the 5-6 students on the Farm Practice rotation week each week with no on-site accommodation.

Brief description of the staff offices and research laboratories

On the Liverpool campus staff offices are located in the VTS, within research group areas for research intensive staff or in the Veterinary School administration building, which also contains 6 “hot” desks available for staff travelling from Leahurst to teach. Most clinically active staff have offices adjacent to each clinical area (Equine hospital or adjacent 1954 Building, HELC for LOH staff). Small animal clinical staff have offices in Ritchie House (a two-storey office block, with 31 single or multiple occupancy offices and a meeting room on the ground floor equipped with audio-visual facilities) a 2 minute walk from the hospital and share hot desks within the hospital. The Main building on Leahurst Campus has offices for the epidemiology, and laboratory research focused staff.

Research groups within the Department of Livestock and One Health and Infection and Microbiomes are based on the main Liverpool Campus in Science Park IC2 Building 2 minutes walk from VTS and the Thompson-yates Vet School administration building. Further, substantial, modern research space is available in the Life Sciences and Ronald Ross Buildings. University shares research facilities via the Technology Directorate including; The Centre for Genome Research (CGR) providing access to cutting-edge equipment and expertise for DNA sequencing and genomic experiments in biological and biomedical sciences. with a distinctive strength in analysis of non-model organisms, including pathogens, agri-food and environmental genomics; The Centre for Proteome Research (CPR) contains state-of-the-art instrumentation in mass spectrometry (MS) with a focus on cell signalling, protein modifications and turnover, and working extensively with researchers in musculoskeletal ageing and Livestock and One Health; The Computational Biology Facility (CBF) provides access to computational techniques to support biological research.

The research facilities at Leahurst are mostly communal labs arranged by function; although some areas are set up by research group. There are 19 containment level 2 labs in total. Four microbiology labs containing class II microbiological safety cabinets (MSCs), standard incubators and anaerobic / variable gas incubators. The virology lab has another MSC, and a room designated for use of genetically modified organisms containing a large floor standing shaking incubator plus an Avanti high speed centrifuge. There are a number of separate clean areas designated for molecular biology work containing real time and standard thermal cyclers plus electrophoresis equipment. A cell culture/ tissue culture suite has three MSCs and a bank of incubators with both standard and hypoxic environments. There is a communal wash up, autoclave and media prep area with designated technical support.

A newly built insectary lab to class 3 standard and two insect rearing units alongside this are temperature and humidity controlled. For parasitology research there is a dedicated diagnostic lab and *Galba truncata* snail rearing room. There is a dark microscopy room for fluorescence microscopy.

Health and safety is managed within the technical team that serve the research areas. The team leader is safety coordinator and has two senior technicians as deputies. H&S inductions and lab specific inductions are undertaken by the technical team. All lab users are expected to adhere to codes of practice for each area.

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 and bio-containment**
- **be designed to enhance learning.**

Healthy animals

The University owns and operates two farms adjacent to the Leahurst Campus. Wood Park Farm houses a closed herd of 220 adult high yielding Holstein dairy cows, calving all year round and 250 youngstock. Ness Heath Farm has 450 Lley or Aberfield breeding ewes, rams and lambs to sale weight, 22 Gloucester old spot sows and piglets to sale weight and 30-50 Aberdeen Angus cross Holstein beef animals sourced from Wood Park to provide students from years 1-5 of the programme with animal handling and herd health management experience. There are two teaching rooms on Wood Park Farm with a student cleaning and disinfection area. There is also a small meeting room and changing area and cleaning and disinfection point on Ness Heath farm.

The Philip Leverhulme Equine Hospital has a teaching herd of 7 ponies and horses kept predominantly outside in a managed paddock system (with field shelters); stables are also available for periods of bad weather.

Research animals

Large animals enrolled in research studies are housed in designated areas on either farm on the Leahurst campus under specific conditions determined by UK Government Home Office Scientific Procedures Act Establishment licence. There are also research facilities for small groups of housed poultry. Small rodent behaviour research is carried out in a dedicated Mammalian Biology unit on the Leahurst Campus run by the Department of Evolution, Ecology and Behaviour, within IVES. On the Liverpool Campus there is a dedicated Biological Services Unit with state-of-the-art laboratory animal facility for housing and use of rodents and rabbits available for researchers from the VEE. The Biomedical Services Unit consists of 9300 m², including CL3 facilities. The unit can house 24,000 mice and 7,500 rats in individually ventilated cages with constant 24/7 monitoring of the environment. The unit has automated feeding and watering systems, and HEPA filtration. Leahurst main building houses a temperature-controlled snail room for propagation and infection of snails and an Insectary for study of vector-borne disease.

Hospitalised animals

Equine

The Philip Leverhulme Equine Hospital (PLEH) is extensively equipped, and has stabling for a total of 42 in-patients. There are two operating theatres, a standing surgery suite and four indoor examination areas. The Barrie Edwards Intensive Care Unit was opened in Autumn 2011, consists of 11 stables monitored 24 hours by cameras, including two stables to accommodate mare and foals, a stocks area for examination, a small laboratory, viewing room and seating area for clients. The radiation therapy facility includes one isolation stable. There are hard and soft lunge areas, one trot-up strip, grazing paddocks and eight turn-out paddocks. A new isolation unit, opened in 2020, providing four stables with a high level of biosecurity for animals with infectious disease. There is a scintigraphy suite and equine CT and MRI scanners, including: digital radiography (Sound Eklin Sprint Air DR system) including additional portable DR system, fluoroscopy, ultrasonography (GE Logic e, S7, S8 and Vivid i Ultrasound Scanners), nuclear scintigraphy (MiE

camera/ Southern Scientific), Magnetic Resonance Imaging (Hallmarq) and state-of-the-art large bore computed tomography (Canon Large Bore) on a sliding gantry system unique to the UK.

In addition to the above, there are five dedicated 'service rooms' - shared clinical working spaces where students/ clinicians work and interact during the rotation week. There will be one seminar room (seats 45), and four teaching rooms in the newly refurbished Sandstone cottage (totalling 67sq m). There is also a dedicated equine clinical skills lab within the hospital area.

The Leahurst Equine Practice (LEP) provides first opinion ambulatory equine care utilising three practice vehicles and up-to-date ancillary equipment such as digital radiography, endoscopy, ultrasonography, dental equipment etc. The practice vets also have access to Equine Hospital facilities. The practice rotation students have their own dedicated study room with computer/ wi-fi access.

Small Animals

The Small Animal Teaching Hospital (SATH), moved from Liverpool to a new state of the art building at Leahurst in 2007. The Hospital covers 2500 m², and has space for 72 in-patients. It is a single storey construction, essentially in three tiers:

The first tier consists of reception, pharmacy, accounts, seven consult rooms, student accommodation, staff accommodation, staff kitchen, seminar rooms, two hot desk areas, dermatology, cardiology, anaesthesia, intensive care unit, recovery, laboratory, gait analysis and student locker area.

The second tier consists of linear accelerator (Varian Vitalbeam), 2 digital radiography systems (Fujifilm FDR) Dexa scanner (GE GE Lunar Prodigy Advance), three ultrasound machines (Samsung RS80a, GE Logiq S7 Expert Easote Mylab 6), 1.5 Tesla MRI scanner (Philips Ingenia), 80-slice CT scanner (Canon Aqilion Prime) and three Karl Storz rigid and four flexible video endoscopes for in various sizes for gastroscopy, urethroscopy and bronchoscopy 3 operating theatres, cat wards (22 places), dog wards (46 places), isolation ward (four places), dog wash, chemotherapy, laundry and food preparation rooms. The third tier consists of sterilising rooms and outside dog outside exercise area. There is a dedicated isolation ward (with a preparation area to change into PPE). It has four kennels (two can be used for cats) and a separate outside exercise area.

The University Veterinary Practice (UVP) is a small animal and exotics practice on the Liverpool campus close to the original hospital site to continue to provide first opinion small and exotic animal experience to students on clinical rotation. It is housed in a purpose built 605m² modern building and opened in 2012 and contains two operating theatres, a dental suite and dedicated diagnostic equipment consisting of ultrasound (Mindray Z5), digital radiography (Siemens Polydorous IT 3166 with AGFA CR30-X viewer) , dental radiography (Aribex Nomad Pro).

Farm animals clinical

Production animal teaching is housed within the Henry Edwards Learning Centre. This building contains three seminar rooms, clinical skills laboratory, Farm Animal Practice facilities and office space for clinicians and academics. In an adjacent building there is room used for additional clinical skills teaching and cadaver cattle foot trimming with workshop to maintain foot trimming equipment (the Cow Lab). A disinfection and cleaning area and vehicle cleaning facilities are between the vehicle parking area and entrance to the building. Three IMV imaging Easiscan B-mode ultrasound machines and one Mindray M7 doppler ultrasound machine are available for reproductive tract and other diagnosis. Digital radiography is also available.

The clinical yard area has two bull pens with bedded area and restraint crushes that allow standing surgery, a large pen for cows with calves, 2 boxes for cows, 4 smaller boxes for large calves and

camelids, a room with 11 individual calf or sheep pens and another with 3 pig pens. There are two surgery rooms, one for small ruminants with an anaesthetic machine and another with stocks for large animal standing surgery. A mobile milking machine allows inpatients to be milked.

Premises used for the practical teaching of FSQ & VPH

Specimens for VPH teaching are obtained from local abattoirs in a dedicated vehicle and demonstrated in the VTS, or post-mortem rooms. Prior to COVID, during the VPH clinical rotation week students visited one white meat, one red meat abattoir and a cheese processing plant. A virtual abattoir system (3D Visual Simulations Ltd) was purchased with seven 3-D Oculus headsets and used to provide some abattoir exposure during COVID. Since April 2022 visits have commenced to one abattoir with food processing facility per week after students gain an understanding of the environment using the virtual reality headsets guided by an academic member of staff. A map of abattoirs and food processing facilities visited in last 3 academic years is appendix 4.7.

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 standard of education and clinical research are compliant with all ESEVT Standards, e.g. research-based and evidence-based clinical training supervised by academic staff trained to teach and to assess, availability for staff and students of facilities and patients for performing clinical research and relevant QA procedures.

For ruminants, on-call service must be available if emergency services do not exist for those species in a VTH.

The VEE must ensure state-of-the-art standards of teaching clinics which remain comparable with or exceeding the best available in the private sector.

The VTH and any hospitals, practices and facilities (including EPT) which are involved with the curriculum must meet the relevant national Practice Standards.

All clinical services are under the direct management of the VEE, other than ophthalmology. They are arranged on a species basis with each clinic within a department that is also responsible for the teaching of clinical science in those species throughout the curriculum. This aids integration of the theory and practical clinical training. Many staff contribute in first and second year within their research and/or clinical specialisation. All departments have UK and European recognised specialists and are recognised training institutions for at least one European college (See staff list in appendix). The hospitals and practices maintain a caseload to match the balanced species coverage of our curriculum.

Equine clinical teaching

All equine clinical teaching is delivered by the Philip Leverhulme Equine Hospital and Leahurst Equine Practice. Both provide a 24/7, 365 days a year emergency service. The hospital accepts referral cases from private veterinarians from across the North of England, whilst the practice has 1350 registered clients within a 30 km radius. The normal opening hours of the Equine Hospital are 8:30 am – 6 pm, but it is open for emergency referrals 24 hours a day, 365 days a year. The normal opening hours of the Equine Practice are 9 am – 5 pm with an out-of-hours on call service is provided outside these hours by an on-call duty vet.

The case load is divided into services with each student spending one week in the Equine Practice, one week on soft tissue surgery, one week in orthopaedics, one week in equine medicine, a week of a mix of surgery, lameness and imaging, and one week in equine orientated clinical skills training. On call services are provided via a hospital rota with intern, resident and senior surgeons and by the

practice vets on a shared rota basis (one vet per session). Students participate in the out of hours work via a dedicated 1 week out of hours clinical rotation week. A farriery clinic every Thursday is attended by students on the orthopaedics rotation week.

Small Animal Clinical Training

The Small Animal Teaching Hospital and University Veterinary Practice provide the majority of the small animal clinical training with 2 days of ophthalmology provided extramurally by the specialist EyeVet Clinic. The opening hours of the Small Animal Teaching Hospital are 8.30 am - 6.00 pm Monday-Friday, with emergencies seen 24 hours a day 365 days a year. The opening hours of the University Veterinary Practice are 9.00 am - 6.00 pm Monday-Friday and 9.00 am - 12.30 pm Saturday, with emergency cover provided by VetsNow, a commercial service provider. Students attend clinics 8 – 8.30 am until 6.00 pm Monday to Friday plus additional time depending on caseload.

The 10 weeks of small animal core rotations are divided between the services with: one week each of internal medicine, cardiology, dermatology, soft tissue surgery, orthopaedics, neurology and imaging. Oncology is covered in 3 days and in the remaining 2 days of that week students travel to the EyeVet clinical to gain ophthalmology experience. The University Veterinary Practice in Liverpool hosts a week of first opinion consultations and surgery including neutering surgery and a week of exotic animal medicine. Students participate in weekend out of hours work for one day each on orthopaedics and neurology rotations.

There are two additional clinics operating in the SATH. The Obesity Clinic operates most days, seeing appointments in the afternoons and conducting DEXA examinations in the mornings. The Pain Clinic (run in conjunction with the Anaesthesia service) operates on Fridays, seeing cases in the morning.

Farm Animal Clinical Teaching

The Leahurst farm practice provides farm animal clinical ambulatory service to local farms and hospitalises case from these farms and offer referral facilities for farmed animals across North West England and North Wales. It has 245 registered clients within a 25 Km radius. An emergency service is operated. Two students from the farm animal rotation week accompany the duty veterinary surgeon on all out of hours calls and provide any care to hospitalised cases. Junior staff always have back-up from a senior clinician. Students are exposed both to normal animals in production environments through hands-on teaching at the two SVS farms and during farm practice and herd health rotations. Diseased animals are evaluated through the farm practice and herd health rotations based on SVS farms, farm practice farms and traveling to other farms. Population-level approaches to disease investigation and diagnosis are taught via the disease investigation rotation with exposure to production animal necropsies. Specific rotation weeks are described in 4.7 below to avoid duplication.

Anaesthesia clinical training

Anaesthesia for all species is provided by a team of postgraduate trained anaesthetists. Students rotate thorough a week of small animal and a week of equine anaesthesia (during which other large animal cases may be seen) with direct decision making and monitoring involvement in anaesthesia. Students in anaesthesia rotation weeks also shadow the out-of-hours anaesthetists on a rota basis.

Pathology clinical training

Companion animal necropsies and clinical microbiology experience is provided by the pathology rotation in the equine rotation block using samples from hospital and external referral cases supplemented by stored material, if required. Staff are European or American Board pathologists or residents working towards those qualifications. Production animal necropsies are undertaken as part of the Disease Investigation week of the Farm Animal rotation block hosted by an experienced veterinary surgeon supported by Farm Practice staff.

Statement that the VEE meets the National Practice Standards

The Equine and Small animal Hospitals were both awarded Royal College of Veterinary Surgeons (RCVS) accredited hospital status and the Small animal, Equine and Farm Animal Practices have all been awarded RCVS accredited practice status after inspections in January 2020.

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: diagnostic imaging, anaesthesia, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services, pharmacy and necropsy facilities.

The VEE owns and operates hospitals, practices and necropsy services accepting all species including exotic and zoo animals specifically to allow student access to a large clinical caseload. They have a large percentage of postgraduate qualified staff, the majority with teaching qualifications, who also contribute to theoretical teaching. This provides an integrated curriculum where clinical staff know what has already been taught and the knowledge base students have to build on in each discipline. All cases are seen with students and students accompany all out of hours emergency cases in the farm animal practice ambulatory clinic. The VEE works with a local specialist practice to provide ophthalmology training to all students. All hospitals and clinics have radiographic and ultrasonographic equipment and both companion animal hospitals have CT or MRI facilities.

Hospitalisation for critical care is provided for all species including neonatal production animals and camelids. All have on site pharmacies with support staff responsible for monitoring and ordering stock. Students are involved in treatment choice decisions in all species and labelling and dispensing when on the Farm Animal Practice rotation.

Necropsy services are provided for all species including forensic pathology, zoo animals, via link with Chester Zoo, and production animals, via a contract with the UK Animal and Plant Health Agency (APHA) as part of national disease surveillance.

The advantage of this level of control over case exposure was demonstrated when clinical rotations were able to be recommenced in September 2020 with adjustment due to the COVID pandemic.

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 animal care and for prevention of spread of infectious agents. They must be adapted to all animal species commonly handled in the VTH.

The Equine Hospital has a purpose-built 176 m² Isolation Stables Unit (opened September 2020) separated from the main hospital facilities comprising of four isolation stables (3 x 14 m² and 1 x 16 m²), and a treatment area (34 m²) each accessed via a separate changing area (7-9 m²) from a (35 m²) circulation area to allow infection control to be practiced through risk zones.

The small animal hospital has a dedicated isolation ward totalling 22 m² with a preparation area to change into PPE. It has two large and two small kennels (that can be used for cats) and a separate solid walled outside run. The Small Animal first opinion clinic (UVP) has six kennels that can be used for isolation; one larger and five smaller (that can be used for cats).

The arrangement of the Farm Animal Clinical area means that individual stables for bulls, cows and calves or smaller production animals can be isolated with individual drainage. Foot dips and waterproof clothing allowing disinfection between patients are placed outside the pens.

Animals are isolated on suspicion before rapid diagnosis of infectious disease using the on-site microbiological culture facilities.

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 academic supervision.

All students undertake the production animal rotation which consists of 10 weeks split into 2 x 5 week blocks. Groups of 5-7 students take the weeks in a different order. All staff teaching are employees of the VEE. There are 3 weeks of training based in the Leahurst Farm Animal Practice ambulatory clinic (clinical practice week, reproduction week, lameness week), 4 weeks of herd health (herd monitor week before a week to produce a whole report on a dairy farm (dairy studies week), youngstock week, beef and sheep week), a week of veterinary public health training, 1 week of "Disease Investigation" (production animal necropsies and pathology interpretation), and 1 week supervised production animals clinical skills using simulators and other learning support materials available in the clinical skills laboratory and visits to the SVS farms. Students have an opportunity for a further three weeks of elective experience in any of the clinical areas and within production animals can choose farm practice, advanced dairy herd management or non-traditional farmed species.

Description of the vehicles and equipment used for the ambulatory clinic

All vehicles have 9 seats, removable seat covers, vinyl flooring and a protected bulkhead to the rear to separate passengers from any equipment transported. Vehicles are replaced on an approximately 10-12 year cycle depending on use and condition.

The Leahurst Farm Animal Practice has 2 Renault Master minibuses equipped with draws permanently stocked with equipment and refrigerated storage for pharmaceuticals and a locked compartment for euthanasia equipment. Another Renault Master and a Ford Custom Combi minibus are not permanently equipped and used to transport students, ultrasound equipment and boxes of specific drugs to fertility visits and to attend other clinical calls. Two further Ford Custom Combi minibuses are used for herd health farm trips. A Ford Transit minibus is dedicated for towing a foot trimming crush to lameness prevention visits with a qualified cattle foot trimming technician. A 2 m long cattle/sheep trailer can move cases from farms and within the Leahurst site for treatment. A Renault Trafic minibus is used for visits by VPH staff for abattoir and food processing plants. All vehicle, other than the three Custom Combi's, have tow hitches to allow transport of crushes or an animal trailer.

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 to prevent the spread of infectious agents.

The Leahurst site is 11 miles by car from the Liverpool Campus and can be accessed by public transport with a regular train service between Liverpool and Hooton. Hooton station is 2.5 miles walk from Leahurst on a footpath or by car. When students must attend Leahurst campus from Liverpool (years 1-3) for timetabled large group teaching sessions buses are provided to bring the

students out to the campus. For smaller group practical classes based at Leahurst during 3rd year students are given £7.50 each per session to cover travel costs. This is also the case for 4th year clinical rotations when students travel to Liverpool to the UVP First opinion small animal veterinary practice and exotic animal rotations in Liverpool and to the Eye Vet for ophthalmology experience.

The Equine ambulatory practice operates a Nissan Narrava and two Hyundai Sante-Fe 4x4 vehicles. Each has built in drawers and a removeable cool boxes which are monitored by temperature loggers. Vehicles used on the Farm Animal Practice and Heard Health teaching are described under 4.7 above. A dedicated Ford Custom combi panel van is based at the Leahurst to transport cadaver and abattoir material for anatomy, pathology, VPH, reproduction and lameness teaching.

Standard 4.9: Operational policies and procedures (including e.g. biosecurity, good laboratory practice and good clinical practice) must be taught and posted for students, staff and visitors and a Biosafety manual must be available. The VEE must demonstrate a clear commitment for the delivery of biosafety and 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 a regular monitoring of the feedback from students, staff and clients.

The VEE has a clear committee structure for health and safety and biosecurity. These are mirrored on each campus and supported by a central University Safety advisors office with specialists in radiation, biological and other risks. Each campus has a Safety and Regulatory Compliance Co-ordinator reporting to the IVES Institute technical manager and working closely with Departmental Safety Co-ordinators nominated by each Head of Department. Leahurst Campus and SVS Health & Safety Committee, chaired by the SVS Dean has oversight of safety within the VEE and reports to the Institute Leadership Team. An overarching Safety and Biosecurity Code of Practice is shared with staff and students online and on the VLE (Appendix 4.8). A Biosecurity and Infection control group chaired by a clinical microbiologist with representatives from each area of clinical, laboratory and pathology activity monitors and co-ordinates biosecurity policy.

[Biosecurity & infection control Biosecurity- School of Veterinary Science Intranet - University of Liverpool.](#)

There is also a contingency plan for outbreak of notifiable diseases:

[SOP: Contingency Plans for Notifiable Diseases in Animals Attending the Veterinary Hospitals at Leahurst | SafetyNet \(liverpool.ac.uk\)](#)

A bespoke online platform “SafetyNet” is used to create, store, share and read a wide variety of safety related materials. It holds information on all hazardous chemicals (CoSHH assessments and safety data sheets), risk assessments (general, project/activity and Genetic Modification), standard operating procedures (SOPs) and training records for staff for each research area. Individual staff and students must sign to say they have read and understood the information before being allowed to work in the specific area. Any updates are automatically notified to all users and require acknowledgement before further work can be undertaken.

A Health and safety induction is given to students in 1st year before any practical classes in VTS and students sign a document to confirm they understand and agree to adhere to the site rules. All presentations and resources are on the VLE.

A 45 minute safety induction is given by the Leahurst Campus Safety and Regulatory Compliance Co-ordinator on the first day of 4th year. Specific inductions are given on the first day of each 5 week clinical rotation block backed up by resources on the VLE.

Comments on Area 4

The control over teaching and clinical resources by the VEE and extensive caseload allowed return to practical teaching quickly during COVID-19. Student groups were reconstituted into household bubbles and specific staff allocated to each group to avoid cross-infection. This was very successful in allowing students to gain practical experience and graduate at the expected time, meeting day one competencies.

Recruitment is underway for further posts needed to teach the increased numbers of student as more candidates gaining the entry requirements than expected during COVID due to UK government policy of awarding teacher assessed grades. Plans are also in place to manage any need for further caseload.

Suggestions for improvement in Area 4

The changing agricultural activities in the region mean that we are looking to new geographical areas to maintain our caseload, which is also true to some degree for our equine ambulatory service. In the long-term we will seek to expand first opinion small animal services, and to renovate or replace our equine surgery facilities.

As we emerge from alterations made in response to the COVID pandemic, we are considering strategies to increase student exposure to small animal emergency work. Currently students see first opinion emergencies during the daytime at the UVP. Our hospitals do not operate an out-of-hours first opinion emergency service. The SATH offers emergency referral services at all times, and students see these cases during the daytime on weekdays, and from 7 am to midnight on weekends. Plans under consideration are to increase out-of-hours emergency exposure during weekdays at the SATH.

Area 5. Animal resources and teaching material of animal origin

Standard 5.1: The number and variety of healthy and diseased animals, cadavers, and material of animal origin must be adequate for providing the practical and safe hands-on training (in the areas of Basic Sciences, Clinical Sciences, Pathology, Animal Production, Food Safety and Quality) 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 VEE owns farms and runs clinics in all species to ensure access to normal animal exposure and clinical cases in all species. This also provides necropsy caseload. To supplement this we have developed relationships with animal charities, police forces and the Animal and Plant Research Agency to further increase necropsy caseload. Exotic animal exposure is via an exotics clinical rotation week for clinical cases and relationship with Chester Zoo for necropsies. We have moved to preserving material that can be used repeatedly rather than fresh material in some anatomy teaching to address the challenge of cadaver sourcing.

Clinical areas monitor case numbers and exposure of students during each rotation week. If case numbers are unexpectedly low then adaptations can be made during each rotation block. See the tables below for case numbers. The curriculum is balanced between species and all species areas have first opinion clinics as well as referral caseload. The referral material is used to discuss the case in a first opinion context, including other treatment options instead of referral. Head of Veterinary Education is leading a project to review all clinical rotation weeks to determine the first opinion / referral balance in overall teaching. One health and population medicine context is included in all species. Populations are discussed in all Farm Animal rotations weeks but the approach that each single animal clinical case/necropsy is a sentinel for the population is emphasised.

The VEE has a sufficient population of healthy animals on the farms and equine clinic to provide teaching of animal welfare. All animals have a clinical record of their health and a registered legal owner responsible for them.

All research must obtain Ethical Approval. Research animals that will undergo a procedure above the threshold specified by the UK Animal Scientific Procedures Act are studied under project licences approved by the UK Home Office under that act. Each person carrying out a procedure must hold a personal licence and have statutory training. The day-to-day care of the animals are under the responsibility of a Named Animal Care and Welfare Officer, usually the line manager of the facility they are housed in. The University of Liverpool's AWERB (Animal Welfare and Ethical Review Body) meets quarterly to review the welfare and policy regarding research animals in the University.

Cadavers: The pathology diagnostic service (serving the VEE hospitals and external clients) provides real cases during student rotations. Pathological material is processed, and preserved or digitally scanned to be used for teaching and examinations scenarios. Small animal and horse cadavers can also be donated for teaching, providing necropsy activity and animal body parts for anatomy teaching (see below). Cadavers and body parts are stored either in cold rooms or freezers and disposed of using external companies for communal or private cremation services.

Approximately 50 dog cadavers are sourced from authorised council pounds and either embalmed or frozen for use in anatomy practical classes. Sheep and horse cadavers for teaching abdominal anatomy are collected weekly during the teaching period from local abattoirs and stored at -20 °C or 4 °C. Fish, rabbits and chickens, are collected from butchers, pest controllers and farms immediately prior to the relevant class, stored at 4 °C and used at a 5:1 student:cadaver ratio.

Specimens (parts of animals rather than the whole cadaver) Ruminant – guts, limbs, eyes, pig hearts; Equine – guts, limbs, heads, are collected from local abattoirs immediately prior to the relevant class and stored at 4 °C. Small mammal / reptile specimens are collected immediately prior to the relevant class and stored at 4 °C.

Preserved specimens: Numerous specimens of varied species, preserved in formalin solution, are used to demonstrate specific anatomical areas (e.g. nerves) or rare specimens.

Radiographs: We have numerous radiographs of head, limbs, thorax and abdomen of numerous species, mainly of dog.

Models: We have various models to teach external anatomy of dog / horse, and specific anatomy of limbs / joints and clinical anatomy (surgical spaying, auscultation and endotracheal intubation).

Computer assisted teaching: We are developing in-house 3D high quality models for pathology and anatomy specimens that are available for self-directed learning through our teaching platform or support during demonstrations / lectures. Detailed photographic interactive dissection guides to canine axial skeleton, abdomen, forelimb, head, hindlimb, perineal region, eye, and equine abdomen are available on the VLE.

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

<i>Species</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<u>Cattle</u>				
<i>Eyes</i>	60	60	60	60
<i>Guts</i>	2	2	2	2
<i>Livers</i>	2	2	2	2
<i>Limbs</i>	10	10	14	11
<i>Feet</i>	8	8	16	11
<i>Gravid uteri</i>	16	20	20	19
<i>Non- gravid uteri</i>	30	30	30	30
<i>Male repro. organs</i>	10	10	10	10
<u>Small ruminants</u>				
<i>Embalmed sheep</i>	1	1	0	1
<i>Heads</i>	100	100	100	100
<i>Hearts</i>	300	300	300	300
<i>lungs</i>	10	10	10	10
<i>Guts</i>	4	4	4	4
<i>Livers</i>	2	2	2	2
<i>Limbs</i>	4	4	4	4
<i>Feet</i>	8	8	8	8
<i>Gravid uteri</i>	40	40	40	40
<i>Non- gravid uteri</i>	30	12	12	18
<i>Male repro organs (sheep scrotums are used to teach castration)</i>	240	240	12	164
<u>Pigs</u>				
<i>Heads</i>	2	2	2	2
<i>Lungs</i>	10	10	10	10

<i>Guts</i>	4	4	4	4
<i>Livers</i>	2	2	2	2
<i>Gravid uteri</i>	2	2	2	
<i>Non-gravid uteri</i>	12	30	30	24
<i>Male repro organs</i>	10	10	10	10

Equine

<i>Heads</i>	5	5	5	5
<i>Heart & lung</i>	3	3	3	3
<i>Guts</i>	1	1	1	1
<i>Livers</i>	2	2	2	2
<i>Full limbs</i>	16	16	24	19
<i>Distal limb & hoof</i>	75	75	60	70
<i>Non -gravid uteri</i>	6	6	6	6
<i>Gravid uteri</i>	2	2	2	2
<i>Male repro organs</i>	6	6	6	6

Companion

<i>Embalmed canine cadavers</i>	30	30	20	27
<i>Fresh canine cadavers</i>	18	18	120	52
<i>Fresh feline cadavers</i>	0	0	3	1
<i>Rabbits</i>	14	14	44	24
<i>Poultry</i>	12	12	46	23
<i>Mice</i>	16	16	8	13
<i>Rat</i>	16	16	8	13
<i>Fish</i>	30	30	30	30
<i>Reptiles</i>	<i>A collection of preserved specimens is available</i>			

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

<i>Species</i>	2021-22	2020-21	2019-20	<i>Mean</i>
<i>Cattle</i>	60	26	60	49
<i>Small ruminants</i>	30	30	30	30
<i>Pigs</i>	22	22	22	22
<i>Companion animals</i>	5	5	5	5
<i>Equine</i>	7	7	7	7
<i>Poultry & rabbits</i>	15	15	15	15
<i>Exotic pets</i>	12	0	24	12
<i>Others (specify)</i>				

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

<i>Species</i>	2021-22	2020-21	2019-20	<i>Mean</i>
<i>Cattle</i>	35	30	31	32
<i>Small ruminants</i>	75	78	54	69
<i>Pigs</i>	13	18	14	16
<i>Companion animals</i>	7053	7095	6715	6905

<i>Equine</i>	1706	1678	1421	1601
<i>Poultry & rabbits</i>	193	112	54	83
<i>Exotic pets</i>	425	247	92	255
<i>Others (specify)</i>				
<i>Alpacas</i>	31	23	27	27
<i>Reindeer</i>	4	1	3	2

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

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

<i>Species</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Cattle*</i>	5470	8320	9549	7779
<i>Small ruminants</i>	288	379	362	343
<i>Pigs</i>	172	173	181	175
<i>Companion animals***</i>	60	0	240	100
<i>Equine</i>	4212	4665	3457	4111
<i>Poultry & rabbits</i>	23	21	17	20
<i>Exotic pets</i>	0	0	0	0
<i>Others (specify)</i>				
<i>Camelids & deer</i>	62	20	21	34

** Numbers do not include animals seen when testing for Bovine Tuberculosis during statutory surveillance visits*

*** Each patient has to be officially recorded and has to be individually examined/treated by at least 1 student under the supervision of at least 1 member of staff. Each live animal affected by one specific clinical episode is counted as 1 single patient.*

**** Indicative number of cases seen at EyeVet during ophthalmology training 20-21 – training online due to COVID*

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)*

**100% of cases used for teaching during the 30 weeks of clinical rotation and 3 weeks of Elective. EPT students see cases outside this time. 33 weeks / 52 weeks = 63%*

<i>Species</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Cattle</i>	63%	63%	63%	63%
<i>Small ruminants</i>	63%	63%	63%	63%
<i>Pigs</i>	63%	63%	63%	63%
<i>Companion animals</i>	63%	63%	63%	63%
<i>Equine</i>	63%	63%	63%	63%
<i>Poultry & rabbits</i>	63%	63%	63%	63%
<i>Exotic pets</i>	63%	63%	63%	63%
<i>Others (specify)</i>				

Table 5.1.6. Cadavers used in necropsy

<i>Species</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Cattle</i>	213	187	158	186
<i>Small ruminants</i>	189	206	154	183
<i>Pigs</i>	7	12	8	9
<i>Companion animals</i>	237	147	194	193
<i>Equine</i>	54	32	67	51
<i>Poultry & rabbits</i>	40*	241	121	134

<i>Aquatic animals</i>	12	8	14	11
<i>Exotic pets</i>	9	11	10	10
<i>Others</i>	300	215	216	244

(Zoo animals & farmed deer, bison and alpacas)

* *Restrictions on moving carcasses due to Avian Influenza outbreak reduced cases during winter 2022*

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

<i>Species</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Cattle*</i>	60	60	60	60
<i>Small ruminants*</i>	60	60	60	60
<i>Pigs*</i>	60	60	60	60
<i>Poultry**</i>	0	0	0	0
<i>Rabbits</i>	0	0	0	0
<i>Aquatic animals</i>	0	0	0	0
<i>Others (specify)</i>				

**Visits for core curriculum Herd Health teaching to SVS and external farms with more than 2 hours on farm. Additional herd / flock visits are made by ambulatory clinic.*

***Herd health visits to poultry flocks do not take place but necropsy examinations and disease investigation training in poultry takes place for all students in the Disease Investigation rotation week.*

Table 5.1.8. Number of visits in slaughterhouses and related premises for training in FSQ

<i>Species</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Ruminant slaughterhouses</i>	18 (with pig)	0	15	17
<i>Pig slaughterhouses</i>	18 (with cattle)	0	15	17
<i>Poultry slaughterhouses</i>	12	0	30	21
<i>Related premises **</i>	24	0	72	48
<i>Others (specify)</i>				

** *Premises for the production, processing, distribution or consumption of food of animal origin*

Each Head of Department is responsible for organising the supply of material within the curriculum area delivered by their department. A team of technicians in VAPP work across departments to support collection and processing/storage of cadavers and specimens. VSET reviews case numbers that are annually collated for submission to RCVS. Any reduction or anticipated shortfall is discussed and plans made to address the issue.

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 direct academic supervision and following the same standards as those applied in the VEE.

All sites other than the one used for ophthalmology training are owned and run by the VEE. A specific member of staff liaises with external providers and the University procurement department regarding contracts. The clinical rotation subject lead also discusses learning outcomes and assessment of students.

The RCVS requires students to undertake preclinical and clinical extramural studies (EPT), which students organise themselves. A database is kept of providers with student feedback. A dedicated

administrator records the activity and an academic member of staff is available to guide students. Reflection on experience gained on these placements is discussed with personal tutors annually.

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.

All species areas have registered animal nurses or animal technicians who supervise the delivery of the day-to-day care of hospitalised animals. These include nursing and husbandry skills. More detailed nursing and clinical care is supervised by clinic veterinary surgeons. Students participate in these activities and receive instruction from our team of animal nurses in addition to academic staff. Skills such as bandaging are also taught on manikins during clinical skills training.

Clinical training occurs in “rotation” groups of 5-7 students. These groups may be split further for work on the ambulatory clinics and between consultation in hospitals and UVP.

All clinics and diagnostic services have been set up expressly for teaching purposes and that as their primary aim. During teaching time all cases and samples are used for clinical teaching. Student rotation groups are allocated to each clinic service and are expected to have hands on involvement in all procedures including nursing care. The member of staff determines the extent of student involvement depending on the complexity of the case and the experience of the student. Maximum student involvement is the expectation. Students communicate directly with clients whenever possible. Students produce surgical reports and clinical records (including structured clinical records in the forms of SOAPS [Subjective, Objective, Assessment and Plan] which are reviewed by staff and feedback given. Herd health reports are produced by student groups following UK Red Tractor Farm Assurance template and discussed with farmers. Final case records, necropsy and diagnostic reports remain the legal responsibility of the staff member.

All timetables for clinical rotation weeks include time for preparation of cases by students to present at rounds, producing an evidence base for treatment plans, tutorials to discuss cases or to work on clinical scenarios before discussing with staff.

Standard 5.4: Medical records must be comprehensive and maintained in an effective retrieval system (preferably an electronic patient record system) to efficiently support the teaching, research, and service programmes of the VEE.

All diagnostic and research cases submitted to Pathology and Microbiology are recorded in a bespoke database system (Beagle) which is searchable using keywords. This can be used to retrieve cases to be used in students research projects.

All other clinics use a recording system called Tristan. This is no longer supported and all clinics are in the process of migrating to Provet Cloud (<https://www.provet.cloud>). This went live in the Farm Animal Practice and UVP in May 2022. The Equine hospital, Equine ambulatory practice and Small Animal Teaching Hospital plan to go live in November 2022 once system testing of their more complex environments is complete. This includes data integration with PACs radiograph storage and all Clinical Pathology assay machines. The system also integrates with the central University accounting system. A module will be developed for Pathology and Microbiology so all systems will then migrate to Provet Cloud.

Comments on Area 5

We benefited greatly during the pandemic from access to our own caseload which allowed us to maintain our teaching programs with limited impact.

Suggestions for improvement in Area 5

We need to continue to modify our caseload so as to address the changing needs of contemporary educational programs. This includes responding to the increased focus on a primary care setting for teaching, and responding to the evolving focus of veterinary care in each species.

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. 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.

The University of [Liverpool's Curriculum Framework](#)⁸ defines our strategy on curriculum including learning resources. One of these is digital fluency which is an area that improved significantly during the COVID pandemic due to the necessity of supporting learning with online options.

The SVS employs various e-learning tools to aid the students with their studies, some of which are fully developed, and some which are new emerging projects:

- Digital Interactive Veterinary Anatomy (DIVA)
- Digital histology / histopathology slides
- 3D modelling of anatomical and pathological specimens
- Epicardio for ECG / cardiology teaching
- Interactive cases

Digital fluency is further developed as follows:

- The VLE
- Microsoft Office and data analysis software available to all students and staff
- Online delivery via Zoom / Teams with stream capture
- Cloud based clinical records software, being rolled out in 2022 and full access on clinical rotations

DIVA (Digital Interactive Veterinary Anatomy) comprises a number of guides with step-by-step anatomical dissections with 'mouseovers' to identify specific anatomy. This is a resource developed in-house and is extremely popular with the students, especially those in 1st and 2nd year.

Histology and histopathology are nowadays largely taught on digital platforms, and all our microscope slides have been digitised and can be viewed online. Most of our histology and histopathology classes are now taught using this online resource. A new project is underway involving in house creation of 3D modelling of anatomical specimens. DIVA consists of 2D images, which lend themselves to most anatomy learning; however, there are some specimens (e.g., bones and joints) that would better be viewed with a 3D modelling tool.

During clinical rotations, students are exposed to clinical records software in the hospitals, and herd-health cattle data analysis software.

All students and staff are fully supported by the University's [Centre for Innovation in Education](#)⁹ (CIE), providing guides, resources, events, workshops, webinars and communities of practice. The CIE oversaw the roll out of our VLE [CANVAS](#)¹⁰ in 2021 and have dedicated ongoing resources supporting staff and students.

⁸ <https://www.liverpool.ac.uk/centre-for-innovation-in-education/curriculum-resources/>

⁹ <https://www.liverpool.ac.uk/centre-for-innovation-in-education/digital-education/>

¹⁰ <https://www.liverpool.ac.uk/centre-for-innovation-in-education/digital-education/canvas/>

Core resources are planned for by the central University under the Executive Pro-Vice Chancellor for Education. He creates strategic planning for information technology, Centre for Innovation in Education and Library Resources according to the [University's Strategic Plan¹¹](#) (including its [Education Strategy¹²](#)) and [Curriculum Framework¹³](#).

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 an IT expert, an e-learning platform, and all 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).

Libraries

The University of Liverpool Library comprises of 3 sites; the Harold Cohen and Sydney Jones Libraries on the main Liverpool campus and the Leahurst Campus Library. These are all part of the University of Liverpool Libraries network of libraries, Museums and Galleries. The University Library employs 99.4 FTE staff. The gross library expenditure over the period 2020 -21 was £ 11,646,219 of which, £ 6,326,261 was spent on 'information provision and access'.

There are two SVS dedicated qualified subject librarians based at the Liverpool Campus – Zoe Gibbs-Monaghan BA (Hons) MA and Samantha Gillies BA (Hons) MA FHEA and Leahurst Librarian Patricia Jonker-Cholwe. The two main libraries are open 24 hours every day of the week throughout the academic year with access via staff or student card: <http://libguides.liv.ac.uk/hours>

Leahurst Library staffed hours: Mon & Wed 09:00-18:00, Tues 10:00-18:00, Thurs 09:00-17:00, Fri 09:00-15:00

The Harold Cohen Library, houses 317 PCs, 184 loanable laptops, and seating for approximately 1,184 users. It contains the main collections in Veterinary Science, Medicine, Dentistry, Mathematics, Engineering and the Sciences. Facilities are available for both quiet and group study. There are bookable study rooms/group study spaces, some with collaborative facilities (integrated PC and keyboard with connectivity for laptops and other devices). The Sydney Jones Library contains Social Science holdings but the reading and learning space is open to students of the SVE

The Leahurst Library is divided into two rooms. The main room has 6 study spaces and 4 comfy sofas. There are 2 PCs in the main area and it also houses an InfoPoint and Self Issue terminal. The PC room in the library gives access to 12 PCs and there are a number of tables, providing a further 10 study spaces, plus additional chairs for students' use. The Library is fully networked and has 'eduroam' WiFi access. The Library is used for study purposes, to borrow books using the self-issue terminal and to consult staff at the helpdesk. Students use the Library for quiet reading as well as information searching and retrieval, IT usage for course work, presentations, printing, photocopying and scanning.

¹¹ <https://www.liverpool.ac.uk/strategy-2026/>

¹² <https://www.liverpool.ac.uk/strategy-2026/education/>

¹³ <https://www.liverpool.ac.uk/centre-for-innovation-in-education/curriculum-resources/>

The Library has a specific [Veterinary Home page](#)¹⁴ which gives them access to Veterinary related teaching materials (reading lists), information on using the library, information on referencing correctly, and learning resources as well as contact details for the Veterinary Science liaison librarian. The page lists useful databases for Veterinary Science such as CAB Direct: Veterinary Science Database, Medline, Scopus, Web of Science, Agricola and BIOSIS. It also enables access to the University of Liverpool's unified search tool 'DISCOVER' which is a customised index of the University of Liverpool Library's print and e-resources, including books and journal articles. It's an easy, yet powerful means of accessing what the Library has from one single search box on the Library homepage. Reading Lists @ Liverpool (Talis Aspire) was implemented in 2013 and this makes it easy for students to access the material recommended by academics, for lecturers to guide student learning by annotating lists and for the library to ensure that recommended material is available to meet demand. Reading Lists are accessible from the VLE and from the Library Web pages. There are copies of all recommended texts in the Library (and as eBooks wherever possible, since it is Library policy to purchase this format in preference to print, if available.)

IT facilities and e-learning platform

All staff and students have access to the IT Service Desk which provides 24/7 support, has a web-based portal for FAQs and information as well as to request support. Requesting support can also be done via phone or email. IT services has specialised units covering the VLE, supporting IT in lectures and teaching rooms and a Leahurst campus-based team that also ensure support for specialised areas such as the medical records system and the equipment in the hospitals, practices and on farms.

The SVS provides additional hardware and software where these are not available centrally, such as the LiftUpp software, the Software to support our EPT database of providers and the Virtual Abattoir and has an annual budget of £90,000 for these costs.

Virtual Learning Environment (VLE)

The University of Liverpool has a contract with Instructure for its VLE, [Canvas](#)¹⁵, that was rolled out in 2021, replacing Blackboard. Canvas has improved functionality and is more intuitive to use alongside with other digital technologies they are using. A carefully managed training plan as it was rolled out meant it was well received by staff and students. The University of Liverpool's Veterinary Postgraduate Unit has been providing wholly online modules since 2010 and so had developed a large base of expertise in developing modules on the VLE. This was incorporated into the BVSc programme modules in 2021 and has greatly improved their appearance and functionality.

Electronic learning resources on and off campus (Wi-Fi, VPN etc)

University services and online resources can be accessed via the Digital University homepage for staff or students. All staff also have access to a secure VPN when working remotely.

Alternatively, a portal called Apps Anywhere can be used to replicate on campus access. It provides access to a wide range of software and a personal storage area (M drive) without needing to be logged on to the Managed Windows Service (MWS) via the students own computer, mobile phone or tablet at anytime, anywhere, to:

- Access and save files on your M drive (and any other shared drives, such as departmental drives);

¹⁴ <https://libguides.liverpool.ac.uk/veterinary-science>

¹⁵ <https://www.liverpool.ac.uk/centre-for-innovation-in-education/digital-education/canvas/>

- Use Microsoft Office, and specialist subject-related software, without needing to install or license it on the computer you are using;
- Run Windows software on non-Windows devices (e.g. iPhone/iPad/Mac); and
- Access course materials provided by IT Services to help you improve your IT skills.

Apps Anywhere is available either through a web browser (such as Internet Explorer) or through a stand-alone application called Citrix Receiver.

Standard 6.3: The VEE must provide students with unimpeded access to learning resources, internet and internal study resources, and equipment for the development of procedural skills (e.g. models). 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 University of Liverpool Library comprises of 3 sites; the Harold Cohen and Sydney Jones Libraries on the main Liverpool campus and the Leahurst Campus Library. Together they contain 1,823,954 volumes and subscribe to over 145,783 electronic journals. The Library provides access to around 1,051,228 electronic books and online access to most major databases. Our veterinary students have access to all of these, both on and off campus.

The entire stock of the Library is included in the online catalogue and all electronic resources can be accessed on or off campus. The Library houses a range of study materials- eBooks, e-journals, textbooks, multimedia etc. The Library stock covers the specific material detailed in module specifications, based on recommended reading by academics, on Reading Lists @ Liverpool. The collection covers all aspects of veterinary science, medicine and surgery, public health, animal husbandry, animal health and welfare, environmental and agricultural studies, and food sciences.

The [Veterinary Library Guide](#)¹⁶ which can be found via ‘Support for my Learning’ on the University Library [home page](#)¹⁷; lists useful databases for Veterinary Science such as CAB Direct: Veterinary Science Database, Medline, Scopus, Web of Science, Agricola and BIOSIS. It also enables access to a unified search tool ‘DISCOVER’ which is a customised index of the University of Liverpool Library’s print and e-resources, including books and journal articles. It’s an easy, yet powerful means of accessing what the Library has from one single search box on the Library homepage.

Reading Lists @ Liverpool makes it easy for students to access the material recommended by academics, for lecturers to guide student learning by annotating lists and for the library to ensure that recommended material is available to meet demand. Reading Lists are accessible and embedded within the VLE and from the Library Web pages. There are copies of all recommended texts in the Library and as we have an electronic first policy, priority is given to eBooks wherever possible. An example list can be located here; [VSCI100](#)¹⁸

The ‘Get it For Me’ service is available if an item is not in our collection or additional copies are needed. If staff need to digitise material for teaching purposes, or if students are unable to collect their resources from the library we have ‘[Book and Copy Delivery](#)¹⁹’ service.

¹⁶ <http://libguides.liv.ac.uk/veterinary-science>

¹⁷ <http://www.liv.ac.uk/library/>

¹⁸ <https://rl.talis.com/3/liverpool/lists/1C0A19DD-6926-0A15-5AB4-711EE4FD46C0.html>

¹⁹ <https://liverpool.cliohosting.co.uk/Home>

[KnowHow](https://libguides.liverpool.ac.uk/KnowHow)²⁰ is a programme of Academic Skills workshops and webinars designed to help students succeed. Sessions are hosted on critical thinking, finding information, and referencing. Students and staff have access to the [LinkedIn](https://uk.linkedin.com/)²¹ Learning online platform, for further training opportunities.

Organisation and supervision of the skill labs.

In years 1-3, students have timetabled access to a clinical skills laboratory, and access outside timetabled time and during revision period for further practice. Each student is timetabled for 2 hours per week in the clinical skills lab throughout years 1-3, where they follow a peer-assisted learning approach supported by online and physical resources and a personal reflective skills diary. Academic staff provide an induction, regular formative assessment and troubleshooting sessions to support student learning, and are accessible at all times via an online discussion board. Technical staff maintain the equipment and manage consumable provision for each class. All students agree to specific lab rules prior to use of the lab, to ensure expectations are clear and the lab used appropriately. Expected behaviour and care of the lab are reinforced by online videos available through the VLE.

In years 4 and 5, students are supported by designated clinical skills spaces:

- Two Farm Animal based clinical skills rooms – Models are used extensively during the Clinical Skills week of Farm Animal Clinical Rotations mixed with on farm sessions with live animal. Additionally, students have a second opportunity to use those associated with reproduction (pregnancy diagnosis, calving, epidural and paravertebral anaesthesia models) under staff guidance during the reproduction rotation week.
- One equine clinical skills area with models and simulators for timetabled clinical skills rotation week
- One small animal clinical skills area for timetabled clinical skills clinical rotation time

See also **Appendix 6.1** for a list of equipment in each area

Comments on Area 6

We are currently remodelling library space in Leahurst to increase quiet study space, and add group study areas.

Suggestions for improvement in Area 6

One area that the clinical teachers wish to develop further is clinical decision-making. Whilst many staff have started developing interactive clinical decision-making resources, the software they have used is prohibitively expensive. Therefore, we are planning to develop this resource using open-source software. Use of open-source software is powerful but technically challenging and so we are intending on promoting creation of this resource with technical support. One of the key aspects of the clinical decision-making approach is that there are consequences to making the wrong decisions, and these will be incorporated by programming in things such as cost of treatment, time to patient discharge and patient health parameters.

²⁰ <https://libguides.liverpool.ac.uk/KnowHow>

²¹ <https://uk.linkedin.com/>

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 all aspects of the educational programme in all advertisings for prospective national and international students.

Formal cooperations with other VEEs must also be clearly advertised.

The SVS advertises its programme and admissions procedures on both the [University](#)²² and [School](#)²³ web pages. The later contains detailed information about the academic requirements for national and international students including those who qualify for a reduced offer under the Universities policy for contextual admissions We also provide information about our work experience requirements, interviews and transparency about how prospective applicants are selected for the course. Admissions requirements are also published by the [Veterinary School Council](#)²⁴ and are available on the Universities and Colleges Admissions Service ([UCAS](#))²⁵ web page.

In addition. we offer a virtual Open Day and four in- person events where around 400-500 people visit our Liverpool and Leahurst campuses and detailed information is provided about admissions, course structure and the way we teach.

Veterinary School staff participate in outreach to local primary and secondary schools and to an extensive outreach programme organised by the university. The academic calendar and tuition fees are updated and published on the university web pages.

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 University of Liverpool

Type of students	2021-2022	2020-2021	2019-2020	2018-19	2017-18	Mean
Standard students	214	205	166	165	171	201
Full fee students	4	1	0	0	2	1.7
Total	218	206	166	165	173	202.7

**extra 2 years added to demonstrate planned numbers before COVID influenced exam grades increased entrance numbers.*

²² <https://www.liverpool.ac.uk/study/undergraduate/courses/veterinary-science-bvsc/entry-requirements/>

²³ <https://www.liverpool.ac.uk/veterinary-science/study/>

²⁴ <https://www.vetschoolscouncil.ac.uk/wp-content/uploads/2022/07/Admissions-processes-and-entry-requirements-for-UK-veterinary-schools-2022-applications.pdf>

²⁵ <https://digital.ucas.com/coursedisplay/courses/f33a6edf-8638-e035-75f6-2b32b32950e5?academicYearId=2022#entry-requirements>

Table 7.2.2. Number of veterinary undergraduate students registered at the University of Liverpool (does not include students who are suspended at the point of data collection)

Type of students	2021-2022	2020-2021	2019-2020	Mean
First Year	227	203	168	186
Second Year	194	168	168	177
Third Year	165	167	165	166
Fourth Year	152	158	154	155
Fifth Year	159	155	150	155
Total	897	851	805	851

Table 7.2.3. Number of veterinary students graduating annually

(2021-2022 data will not be available until after resit examination at the end of August; currently 140 passed and 21 resitting in August, 159 Standard students and 2 Full fee students)

Type of students	2020-2021	2019-2020	2018-2019	Mean
Standard students	150	148	158	152
Full fee students	0	2	0	1
Total	150	150	158	152.7

Table 7.2.4. Average duration of veterinary studies for those graduating in 2021

(2021-2022 data will not be available until after resit examination at the end of August)

Duration (5 years/ 6 years with intercalation)	% students who graduated in 2021
Duration 5/6 years	87.3
Plus 1 year	10
Plus 2 years	2
Plus 3 years or more	0.7

Table 7.2.5. Number of postgraduate students registered at the University of Liverpool

Type of students	2021-2022	2020-2021	2019-2020	Mean
Interns	20	20	18	19
Residents	32	30	34	32
PhD students	35	31	23	30
Veterinary Professional Studies PgCert/PgDip/MSc	797	770	680	749
Veterinary Business Management PgCert	117	140	115	124
Veterinary Physiotherapy PgDip/MSc	48	45	50	47.7
Diploma of Bovine Reproduction MSc	11	13	10	11.3

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 of 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.

All UK and overseas applications must be made through Universities and Colleges Admissions Service (UCAS), a government backed independent charity, that is the shared admissions service for all UK higher education. Applicants are required to declare their work experience via an online questionnaire.

Academic Entrance Requirements

General Certificate of Education (GCSE)

(The UK 16 year old school qualification, typically 9-11 taken. Graded 9-1. 9 highest).

At least five GCSEs at grade 7 (A) including two science GCSEs, with at least a grade 6 (B) in English and Mathematics.

A-level examinations

(The UK 18 year old school qualification, typically 3-4 taken. Graded A-E, A highest).

AAA in three A Level subjects:

Grade A in Biology, Grade A in Chemistry or another academic science-related subject Grade A in a third subject of the applicants' choice. If Chemistry is not offered at A-level, it must be offered at AS-level (at grade B or above).

For both GCSE and A-Level examinations, we accept equivalent UK and overseas qualifications and will accept school transcripts where national exams have not been taken at aged 16.

Work Experience (non-academic) Requirements

Applicants are required to demonstrate a minimum level of practical hands-on work experience with a veterinary surgeon and with live animals in a commercial setting. Applicants are encouraged to undertake varied experience in order to further their knowledge and understanding of the profession, however there is no selective advantage to completing more than our published minimum experience (currently 15 days). The minimum work experience is reviewed annually in response to feedback from applicants and providers to set a volume of experience that does not disadvantage those with less access to work placements. SVS also collaborated in developing a [MOOC²⁶](#) which is accepted in place of work experience with a veterinary surgeon.

Interview Process

All applicants who meet or are predicted to meet our academic requirements and have undertaken the work experience listed above are invited to interview. We typically interview 700-900 applicants using an online platform.

The interviews are structured panel interviews and are designed to objectively assess evidence of communication and observation skills, awareness of animal welfare, knowledge of current and controversial scientific and veterinary matters, resilience and ethical reasoning. Interviews are conducted by external veterinary surgeons and by university staff. The interviews include three questions or scenarios are marked independently by at least two interviewers following a detailed rubric.

Students who are ill or who have disabilities

During the application process, students are invited to declare any disability or ill health which may affect their initial application so that appropriate accommodations or a rescheduling of an interview can take place.

²⁶ <https://www.futurelearn.com/courses/vet-school-application-support>

Selection

The highest scores at interview are given an offer. Applicants with borderline scores at interview are further reviewed and contextual data and prior academic performance considered. Typically offers are given to 50% of those interviewed and all applicants (full fee and standard applicants) are considered in the same way.

Widening participation

The SVS participated in the national Realising Opportunities and the local Liverpool Scholar's schemes which both aim to support and prepare secondary school pupils from low socioeconomic areas wishing to progress to university. The SVS also contributes to a large number of outreach activities and supports the University of [Liverpool's policy on Contextual Data for Fair Access](#)²⁷; whereby applicants from the scheme above and those with contextual data are given a two-point reduction from our standard A-level academic entrance requirement of AAA to ABB.

Alternative routes into Higher Education

We have two application routes to the BVSc for adult learners who have non-traditional qualifications and have been out of education for at least 5 years and wish to enter to follow a veterinary career. Applicants are required to have five GCSEs at grade B (grade 6) including Maths, English and Science at the time of application.

Pre-approved 'access to higher education' diplomas and The Foundation course in Health and Veterinary studies (year 0), a six-year foundation course with progression to progress to the 5-year BVSc.

Composition and training of the Selection Committee

The SVS has a Recruitment, Admissions and Widening Participation Committee (RAWP) consisting of 10 – 12 members of staff, including the Head of Veterinary Education, Director of Recruitment and Director of Admissions. This committee meets three times a year and sets admissions strategy and recommends changes in admissions policy and selection criteria to the Faculty Intake Strategy Group.

The RAWP Committee includes an interview lead who recruits and trains around 50 internal staff and 20 – 30 external veterinary surgeons to undertake our undergraduate interviews. All members of the interview panel undertake online training in Equality and Diversity and Unconscious Bias. In addition, every member of the interview panel is given specific written instructions regarding the conduct of the interview, a detailed marking rubric and video training in the format and marking of interviews.

Appeals Process

Admissions appeals are initially reviewed by the RAWP committee and if unsuccessful, applicants are directed to the University of Liverpool [Undergraduate Appeals and Complaints Policy](#)²⁸

How the University of Liverpool adapts the number of admitted students to the available resources

The target number of students for acceptance onto the BVSc programme is set by the Dean, in consultation with VSET allowing for financial planning, staff, case numbers and the estate. How many students may be returning to year 1 after suspending their studies, students who will enter

²⁷ <https://www.liverpool.ac.uk/study/undergraduate/applying/contextual-data/contextual-admissions/>

²⁸ <https://www.liverpool.ac.uk/study/undergraduate/applying/admissions-policy/>

via their foundation year route and students who may need to resit their first year of study are factored in to reach a planning total for the new intake annually.

Prospective number of new students admitted by the VEE for the next three academic years:

It is anticipated that the number of new students for the next three academic years will total approximately 180-200, including 170 – 180 new students and 10-20 resit, suspension and foundation year students who will also (re)join the first year.

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 SVS welcomes students with disabilities, and during study appropriate support can be provided for many circumstances even if the effects of disability or ill health are substantial. However, if a student has a condition which would make it impossible for them to work safely with patients, clients or colleagues, or to acquire the skills necessary to complete training, even with adjustments and support, then they cannot be accepted onto the undergraduate veterinary medicine programme. Applicants are initially directed to the Higher Education Occupational Physicians/Practitioners ([HEOPS](#))²⁹ document outlining the fitness standards expected of veterinary students and advised that once accepted onto the course, they will not be allowed to progress until they have been assessed by the Occupational Health Unit at the University of Liverpool. All cases of ill health and disability are considered on a case by case basis.

Disability Support

Student disabilities are identified in three formal ways.

1. Students should declare any disabilities through their UCAS application process
2. All students must submit a health questionnaire upon commencing their studies, which is screened by the University's Occupational Health Unit. Students with a health issue which may impact upon their ability to meet the demands of the course are called for an occupational health assessment, following which a recommendation is made regarding their fitness to study i.e. Fit to study, fit to study with adjustments, unfit to study at present. Students are signposted from occupational health to seek appropriate medical and disability support, if they fall into the last two categories.
3. Student monitoring processes enable identification of students with undeclared disabilities which are impacting their studies, either through the Request for Support system which staff and students can use to flag a student who is struggling, or through the Engagement Monitoring Process (Appendix 7.5). If potential disability support needs are identified students are referred to the Disability Advice and Guidance team.

Students may also approach Disability Advice and Guidance at any time of their own volition.

Referral of a student to Disability Advice and Guidance via one of these mechanisms enables the student to meet with a disability advisor to obtain a Disability Support Plan (DSP). This includes provision of a [Student Support Information Sheet](#), detailing recommended adjustments which could be made to the student's learning experience. The student support information sheet is returned to the SVS's [Departmental Disability Contact](#), who is responsible for ensuring

²⁹ https://heops.org.uk/wp-content/uploads/bsk-pdf-manager/2019/09/1521730981HEOPS_Veterinary_Students_fitness_standards_2013_v10.pdf

appropriate implementation of the plan, and that the adjustments are compatible with the demands of the course. Rarely, some adjustments may not be compatible with achieving the Day One Competences, in which case a discussion is held by the departmental disability contact with the student regarding their options for proceeding without that adjustment. The student support information sheet is also placed on the student's digital record.

Adjustments pertaining to the formal examinations in years 1-3 (such as extra time or rest breaks) are implemented by the University's [Student Administration](#) department. A list of the expected adjustments is checked by the SVS departmental disability contact ahead of the assessment period to ensure it is accurate.

Adjustments pertaining to clinical rotations are communicated to teaching leads each week by the SVS Student Experience Administration Team, with the consent of the student. Students undertaking EPT placements may request a letter detailing the key points of their student support information sheet to be sent to the placement provider to ensure their needs are considered.

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.

Criteria regarding progression are published within the Programme specifications on the VLE (Appendix 3.1 pp.22-24). Each student must pass all professional examinations and rotations to graduate. Progress is monitored formally via the assessment structure, and through formative assessments and the tutors: staff tutors regularly meet with all students and evaluate progress.

³¹ <https://www.liverpool.ac.uk/student-support/study-support/disability-study-support/>

³² <https://www.liverpool.ac.uk/student-administration/managing-my-studies/suspending-my-studies/>

Remediation and Support for Students Who do not Perform Adequately

Process

All students are permitted a first and second attempt at each summative assessment. Students are required to repeat only the components (theory, practical or continuous assessment) which were failed. All assessment components must be passed at the second attempt in order to progress to the next year of the course.

Students whose assessment was adversely affected by extenuating circumstances (such as unforeseen illness), as granted by the Extenuating Circumstances Committee (ECC), will be permitted to sit at the next available opportunity at the same attempt status as their original sitting (Appendix 1.3 Codes of Practice on Assessment Appendix M).

Should a student fail to satisfy the Board of Examiners at the second attempt they are liable for termination of studies but may be permitted a repeat year at the discretion of the Board of Examiners. As per the Ordinance, (Appendix 1.3) Students will not be permitted to repeat more than one year of study and must complete the programme within eight years. The decision to award resit attempts is at the discretion of the Board of Examiners and each case is considered on an individual basis and always to the benefit of the student where this is relevant. The criteria for

progression and awarding of repeat attempts are described in the Student Handbook (Appendix 7.1). A summary of the progression decision process can be found in Appendix 7.2.

Support

Students who fail an assessment are offered feedback on their attempt, including support for their learning approach, by the academic Year Lead, and pastoral support from their personal tutor and the Senior Tutor. Students on a repeat year (3rd/4th attempt) have a Progress Meeting with the Assessment Officer/Chair of the Board of Examiners and their Year Lead before commencing their repeat attempt, at which they discuss their approach to and the implications of their repeat attempt. They are required to sign a specific Resitter Agreement which sets out the behaviours which are likely to lead to a successful repeat attempt, and during their repeat year they work through a Resitter Portfolio to support them in identifying their barriers to learning, build their learning skills and evaluate their mindset. This portfolio is visible to the student's personal tutor who supports them to develop their skills, and is viewed each semester by the academic Year Leads who gives feedback on their progress. Resitting students are also directed to the Peer Academic Mentoring group, from whom they can obtain peer support as they endeavour to improve their learning approach.

Fitness to practise

Professional fitness requirements are made explicit to students in the Handbook and via the Student Agreement (Appendix 7.3) which students must sign each year. Students who fall short of these requirements are managed initially through the student Engagement and Professionalism (Appendix 7.4) process, which allows tracking and remediation of professionalism transgressions using a tariff points (TPs) system. Minor issues incur 1-2 TPs and a warning and offer of support by email, moderate issues incur 3-4 TPs and a meeting with academic staff to identify remediation needs, and severe issues incur 5-6 TPs and involvement of the Dean who may refer the student to further University Fitness to Practice (FTP) or School Formal Progress proceedings. The TPs are cumulative, such that a student with multiple minor professionalism concerns will gain TPs for each issue.

Student engagement (Appendix 7.4) is monitored as part of both the professionalism and the student support processes (for details see Appendix 7.5).

Transparency of these Criteria/Procedures

As mentioned above, all these procedures are outlined in the Student Handbook (Appendix 7.1) and students sign an agreement each year. These are also made available on the Student VLE page.

*Description of the rate and main causes of attrition**

<i>Year of entry</i>	<i>Reason for Attrition</i>		<i>% of original cohort</i>
	<i>Academic</i>	<i>Personal</i>	
<i>2013</i>	6	2	4.7%
<i>2014</i>	5	5	6.1%
<i>2015</i>	6	4	6.1%

**Defined as students who leave the course and never return*

The RAWP committee is responsible for reviewing policies and practices relating to the recruitment and admission of students for the BVSc and Foundation programmes. The committee audits and monitors SVS's admissions activities in order to maintain quality of provision, and identifies and minimises barriers to the access, success and progression of students within the SVS. The Committee reports to the Faculty Student Intake Strategy Group and the Veterinary Education Senior Leaders Group. Minutes of the Committee meetings are published on the VLE (Appendix 1.1 C).

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.

Students can be excluded due to lack of academic progress (Appendix 7.2) or lack of fitness to practise (Appendix 7.5). Lack of academic progress and professionalism issues are monitored by the Student Monitoring Sub-Committee. Decisions on exclusion for lack of academic progress are made by the Undergraduate Board of Examiners, while professionalism or misconduct issues are referred to the Faculty Health and Conduct Panel for consideration. Details of the regulations governing the Code of Practice on Progression are in Appendix 1.3 Appendix E.

Following exclusion for reasons of lack of academic progress, students have the right of appeal to the Faculty Progress Committee within ten days of the communication of termination of studies and if unsuccessful to the Senate Progress Committee. Should students be considered unfit to practise and have studies terminated, they may appeal to the Professional Appeals Board. The Code of Practice on Appeals are in Appendix 1.3 (Appendix F and F Annexe 1 and 2).

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 of reasonable adjustments for disabled students, consistent with all relevant equality and/or human rights legislation.

There must be effective mechanisms for resolution of student grievances (e.g. interpersonal conflict or harassment).

Providing support to students starts in the first "Welcome week" at SVS – devised and run by staff (year 1 lead, Director of student experience, senior tutors, student experience administrators) and students (LUVS, peer support, and peer mentors) together, activities focus on ensuring students can find sources of support, meet key people, build bonds etc.

Teaching administration

Each year of the course has a senior member of academic staff (Year Lead) who oversees the teaching and assessment for that year. Each Year Lead works closely with a lead Student Experience Administrator, assigned to each year. At the beginning of each year, the Year Lead gives a course introduction to the cohort, detailing key features of the course, mechanisms for feedback and actions taken based on the previous year's feedback, and sources of support. Students may contact the Year Lead by email at any time through the teaching year, to obtain academic assistance.

The Student Experience Administrators are accessible by their personal email, a general office email and by open drop-in to the SVS offices. Student Experience Administrators signpost students to other sources of support and can offer assistance with course-related queries.

Mentoring and tutoring

In addition to the student experience administrators and Year Leads, each year of the course has one Senior Tutor who oversees pastoral support for that year and works in a team with the other senior tutors to drive pastoral support for the SVS as a whole. The senior tutors offer drop-in sessions on a regular basis, both virtual and in-person, for any student experiencing pastoral issues, and train and monitor the Personal Tutors.

Each student is assigned a Personal Tutor (also known as an Academic Advisor), with each having a maximum of 10 tutees. Personal Tutors are members of academic staff, who are intended to be the first port-of-call for students seeking academic and pastoral support. They are required to meet with their tutees once per semester as a minimum, for formal Personal Development Plan discussions. These are scaffolded by an online form which students use to map their progress in various key areas, and followed up by notes from the Personal Tutor. Students may contact their Personal Tutor at any time between PDPs, and the relationship should be flexible according to the student's needs. The Personal Tutor is not a counsellor nor a learning specialist; much of their role will be signposting to other sources of support. They are a formal link with the SVS, and as such can mentor their tutees through their academic journey, and many remain in contact with their tutees following graduation.

The SVS has an excellent level of student engagement with mentoring and support. The long-established and highly successful [Peer Support team](#)³⁰ is trained and supported by a counsellor to offer a confidential listening service to other students, and provides support at student social activities as well as working with staff to shape the wellbeing activities within the SVS.

A new initiative in 2021-22 was the Peer Academic Mentoring team; a group of students from years 2-5 trained in coaching and mentoring, learning theory and mindset development to offer learning development support to their peers. Long term mentoring is offered as well as one-off coaching sessions and workshops to their peers, supported by staff via online ad hoc contact and termly debriefing sessions.

Less formal, but no less valuable, is the student Buddy Family system, conceived and run by the student Liverpool University Veterinary Society. All students on the BVSc are assigned to a buddy family, containing at least one student from each year of the course. This system was introduced in 2019-20 to ensure students have a support network of peers to offer informal mentoring through the course. The long-term aim is that the relationships built in these families will continue as students graduate and enter their careers.

Career advice

³⁰ <http://www.luvs.org.uk/peer-support.html>

Career advice is embedded within the programme. Within the curriculum many career aspects are covered in Professional skills including sessions on preparing a Curriculum Vitae, developing your professional identity, employment law, and an employability session run by the central university careers service. Informally tutors and members of academic staff also offer career advice.

Students have access to the University central careers services and Careers fair, and LUVS hold their own veterinary careers fair at Leahurst in 4th year, supported by the VEE where industry partners can speak to students.

Listening and counselling

Within the SVS, students from years 2-5 can volunteer to train as peer supporters and join the peer support team. This group offers confidential listening and signposting for students with a variety of difficulties, and are themselves supported by a qualified counsellor via fortnightly reflective practice sessions.

The SVS funds a therapist for one day per week all year round, offering long term therapy either in person on the Leahurst campus, or online according to student preference. This is in addition to the central [University counselling service](#)³¹, ensuring our students have enhanced access to various therapies and counselling, and the option of evening appointments to work around clinical rotation timetables.

In addition to counselling, Student Services has a [Wellbeing team](#)³² which offers confidential one-to-one general wellbeing support and access to further services, and a [Mental Health Advisory Service](#)³³ which is particularly valuable for those students with complex needs who already receive support from external services. The SVS's Director of Student Experience and Senior Tutor team work closely with the Mental Health Advisory Service to support students with complex issues, and to obtain training in de-escalation, mental health first aid and suicide prevention. The head of the counselling service is a member of the Staff-Student Liaison Committee, putting student welfare at the heart of our processes.

Assistance in case of illness, impairment and disability

Students who are absent due to illness or impairment must complete an absence form detailing the reason for their absence. They may self-certify for up to 5 days, and thereafter must provide medical evidence for their absence. If the illness/impairment affects an assessment, but is not managed by a disability support plan, the student may submit a claim for extenuating circumstances which is evaluated by the Extenuating Circumstances Committee. Regardless of whether an absence is approved or an extenuating circumstance claim granted, a student with an ongoing or severe illness or impairment is flagged by the relevant student experience administrator to the Student Monitoring Sub-Committee, enabling support to be offered.

The Director of Student Experience chairs the Student Monitoring Sub-Committee, which consists of the student experience administrators, senior tutors, year leads and the departmental disability contact enabling a coordinated approach to student monitoring and support. This group oversees the Request for Support and Engagement Monitoring processes (Appendix 7.5), and contributes to the professionalism process in addition to monitoring individual students of concern. Students with illness or impairment may be brought to this group via extenuating circumstances, absence forms, low engagement or a direct Request for Support either from the student themselves or by a peer or other member of staff. These students are invited to a meeting, at which support needs are identified and actions implemented. This will include referral to further services as required e.g.

³¹ <https://www.liverpool.ac.uk/studentsupport/mental-wellbeing/counselling-service/>

³² <https://www.liverpool.ac.uk/studentsupport/mental-wellbeing/wellbeing-advice/>

³³ <https://www.liverpool.ac.uk/studentsupport/mental-wellbeing/wellbeing-advice/>

mental health advisory service, occupation health or [Disability Advice and Guidance](#)³⁴, and a discussion about [suspension of studies](#)³⁵ if the illness is ongoing and impacts their ability to engage despite appropriate support. The student's personal tutor is invited to the meeting to offer additional support.

A student with significant health issues who does not engage with support or who does not show insight into their limitations and needs will be escalated via the Fitness to Continue in Study process, and may incur SVS penalties if their failure to address their needs is considered unprofessional (see Standard 7.5. and Appendix 7.5).

Clubs and organisations

Students can all join the student society; LUVS, and all but a few do so. LUVS oversees all social and extra-curricular student-led activity within the SVS, and has a committee of elected members. Each week, the LUVS president sends out a "What's On" email to students detailing activities in the upcoming week, and the activity calendar is visible through their website: www.luvs.org.uk.

Each year, the LUVS committee elects two social secretaries, who organise the major social events for the year. These include autumn and spring balls, the winter formal and informal dinners and the Vet Revue. These are student-organised events, with the exception of Vet Revue which does involve some staff input to proof the script and judge the sketches. In addition, two charity representatives drive the fundraising extracurricular activities each year, most notably during "raising and giving" week in February.

There are a large number of student sub-societies and groups under the oversight of LUVS, with active membership ranging from 40 – 500 students. There are seven clinical and scientific sub-societies. Membership is open to all students from years one to five, and activities focus on complementing the taught curriculum and providing opportunities to enhance student competence and expand horizons.

Clinical sub-societies are:

- Liverpool Farm Animal Veterinary Society (LFAVS) – supported by National FAVS and working in partnership with British Cattle Veterinary Association and Sheep Veterinary Association. Members have automatic membership of national FAVS, and access to the FAVS national congress each year.
- Liverpool Equine Veterinary Society (LEVS)
- Liverpool Small Animal Veterinary Society (LSAVS)
- Liverpool Veterinary Anatomy Society (LVAS)
- Liverpool University Veterinary Zoological Society (LUVZS) – offering free access to The Expedition Project including courses on wildlife medicine
- Liverpool University Veterinary Behaviour Society (LUVBS)
- Liverpool Student Veterinary Emergency and Critical Care Society (LVECCS) – one of only three UK vet schools to have a branch of the student veterinary emergency and critical care society.

Non-clinical societies which are highly active within the SVS:

- LUVS LGBT+ society arranges events including evening talks.
- Liverpool Veterinary Sustainability Society (LVSS), tackling environmental and sustainability issues such as single-use plastics in the SVS hospitals

³⁴ <https://www.liverpool.ac.uk/studentsupport/study-support/disability-study-support/>

³⁵ <https://www.liverpool.ac.uk/student-administration/managing-my-studies/suspending-my-studies/>

Sports teams/groups offer access to sport both for competition and enjoyment. The netball and squash groups offer wellbeing sessions open to staff and students in addition to their normal team activities including Hockey, Football, Rugby, Netball and Squash.

The peer supporters and peer academic mentors are open to all to join each year, and arrange regular informal drop-in sessions (e.g. “Tea and Talk”) to facilitate student access to support.

Two of our students founded a Liverpool branch of [Animal Aspirations](#)³⁶, and have taken a leading role in driving efforts to increase diversity among applicants.

All SVS students are members of the main University student’s union called the Liverpool Guild of Students. Due to the distinct nature and longer duration of the programme SVS students have not traditionally engaged with the Guild of Students but tend to focus on LUVS activities.

Description of the mechanisms for resolution of student grievances

For interpersonal conflict and harassment, students can utilise the SVS support systems outlined above, e.g. their senior tutor, peer supporters or the student experience team. They can also approach the Liverpool Guild of Students if they want advice from outside the SVS. Otherwise, they can go directly to the university student administration services team using their [Report and Support](#)³⁷ Mechanism to help students particularly for racial, sexual or other forms of harassment. The Student administration services has clear guidance for students on conduct in their [conduct and discipline](#)³⁸ pages.

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 compliance of the VEE with national and international legislation and the ESEVT Standards.

There are multiple mechanisms whereby students can convey their wants and needs to the VEE.

Student Surveys (Internal Outcomes assessments)

Course evaluation in years one to four occurs at the end of each teaching semester. Students are asked to evaluate each subject area, the course as a whole, rate their wellbeing and describe factors which have impacted them.

During the clinical rotation phase, course evaluation is sought at the end of each rotation block; six times in total (Appendix 3.3 Rotation timetable). Questionnaire content varies somewhat between blocks, to ensure non-subject-specific questions are asked at the most pertinent time. In addition, independently-facilitated focus groups are run twice during the clinical rotation phase, to enrich the evaluations received via the questionnaires.

Response rates are generally high, ranging from 50-80%. Course evaluation results are collated by the Director of student experience, and distributed thus:

- All results to the academic year lead for each year
- Wellbeing evaluations to the senior tutor for each year
- Subject specific evaluations to the subject lead for each area

Evaluations are discussed at UEC, the Student Monitoring Sub-Committee and used to build responses which are used by the Internal Outcomes Assessment lead to inform the activities by the CDG.

³⁶ <https://www.animalaspirations.com/>

³⁷ <https://reportandsupport.liverpool.ac.uk/>

³⁸ <https://www.liverpool.ac.uk/student-administration/policies-procedures/conduct-discipline/>

Tutor System

Students all have an allocated member of academic staff as their personal tutor, who provides a point of contact and source of support throughout their studies. Students meet with their tutor at least once per semester for a formal Personal Development Planning meeting, and may have ad hoc contact with them between times. This relationship is a useful way for all students to raise concerns, issues and needs regarding the course in a one-to-one conversation with a staff member they know and trust. Issues raised in this way can be fed back by the tutor to the committee structure via the Senior Tutor or Student Experience team.

SSLC and year reps

The SSLC as per Standard 1.4 is an important termly forum where staff and students identify, discuss and address concerns, processes and enhancements to the academic, social and wellbeing programmes and resources within the department and FHLS, based on student feedback. This committee is chaired by the Liverpool University Veterinary Society and has representation from all years as well as the University's Guild of Students and follows the [Code of Practice on Student Representation](#)³⁹. The year representatives also meet with the academic year lead and senior tutor ahead of each SSLC meeting, to address any operational academic or wellbeing issues directly, and the SSLC has an active Teams site enabling ad hoc discussion with the Director of Student Experience at any time.

Dean's Town Halls and Anonymous Email

In addition, the Dean offers an anonymous email address to all staff and students to raise issues and complaints and regularly holds "Town Halls" open meeting where important issues can be discussed.

Student complaints and grievances

The University [Student Charter](#)⁴⁰, sets out the general entitlements and responsibilities of students. This is made available to students on the university website, but also signposted to students in their Programme Handbooks.

Students are directed, in the first instance to the Student Charter to clarify what is reasonable for them to expect from the University in the relevant area, and whether they have discharged their corresponding liabilities, if applicable. Students are directed to the SVS Support Office or the Guild of Students to help understand and progress a complaint.

A complaint is managed using the [Student Complaints Policy and Procedure](#)⁴¹ which sets out how students may seek to have their complaints addressed. It should be recognised that the vast majority of student complaints can be handled fairly, amicably and to the satisfaction of all concerned on an

informal basis. There are two stages contained within the Student Complaints Policy and Procedure

to allow escalation should a student consider that such an issue or concern has not or cannot be resolved informally.

³⁹ https://www.liverpool.ac.uk/media/livacuk/tqsd/student-enhancement/student-representation/cop_on_student_representation.pdf

⁴⁰ https://www.liverpool.ac.uk/media/livacuk/student-administration/student-administration-centre/documents/Student_Charter_final_June_15.pdf

⁴¹ <https://www.liverpool.ac.uk/media/livacuk/student-administration/student-administration-centre/documents/StudentComplaintsPolicyandProcedureMay2016.pdf>

Comments on Area 7

The SVS has a low level of attrition across all years of the programme which supports robust selection and support mechanisms. There are transparent selection process and contextual offers.

In 2020 and 2021 there was an increase in student admission numbers across most sectors in the UK due to the graduating high school students' grades being elevated by teacher assessments instead of standardised National examinations. We have made fewer offers in 2022 and it is likely we are back on track for a new intake of 160 students (total cohort of 180) in year 1 in the September 2022 entry.

Suggestions for improvement in Area 7

Work is continuing on both recruitment (starting with primary aged children), widening participation and selection processes.

Personal tutors are staff from across the VEE and Institute, which reduces the workload per staff member but poses issues in some cases with engagement of the personal tutor with their student tutees, especially if they are working from another campus. More training and engagement plans are areas to improve.

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.

As outlined in Standard 1.4, the SVS' assessment strategies have been informed by, and are consistent with, the University's [Quality and Enhancement Framework](#)⁴². The students and staff are directed to the Codes of Practice on Assessment (Appendix 1.3) via the VLE which relates to undergraduate student assessment within the SVS. The policy should be considered in conjunction with the BVSc Programme Specification (Appendix 3.1) and Student Handbook (Appendix 7.1) available to staff and students via the VLE.

In common with all UK university programmes, the VEE utilises external examiners from academia or the veterinary profession familiar with the area of study. They have strict criteria for appointment and a 4 year tenure. External examiners are provided with programme information, reports from previous years and draft assessments with model answers for comment, are invited to attend assessments during the examination period, and review of scripts post-moderation. External examiners attend Subject Review and Progression Boards followed by submission of report to the FAQSC, to which a response is submitted by the SVS (see appendix 1.2 and 1.3 CoPA appendix H: External Examiner System for Taught Provision). Current external examiners are listed in the programme specification Appendix 1.3.

All assessments integrate knowledge across the 6 subject themes (see Appendix 3.1 p.18), rather than subjects being assessed in isolation. These themes run throughout all five years of the programme and include 1. Normal structure and function; 2. Animal Husbandry and Welfare; 3. Disease processes; 4. Epidemiology and Public Health; 5. Skills e.g. Professional skills, Study Skills, and Research Skills; and 6. Management of Disease.

The assessment strategy ensures students are required to demonstrate theoretical knowledge, application of knowledge and the development of clinical competence knowledge. In each of the first three years there are both formative and summative written and practical examinations. In addition, students complete in-course assessments. For all assessments constructive alignment is utilised to ensure that assessment is matched to intended learning outcomes and student learning activities.

Methodologies for assessment

A range of assessment methods are used to assess students' knowledge and skills and are tailored to the stage of programme within which the assessment sits:

Theoretical knowledge – short answer questions, single best answer questions (multiple choice or extended matching questions), data interpretation questions, practical spot questions, objective structured preclinical examinations and continuous assessment including essay questions, presentation, tutorial contributions, drawing tasks, written reports and case-based application including the use of LiftUpp during clinical rotations as described in Standard 3.1.

Preclinical practical skills – Objective structured preclinical examinations, practical spot questions and research projects

Clinical practical skills – Objective structured preclinical examinations, LiftUpp and directly observed procedures (Practical Competency Assessments, PCAs; See Standard 3.1; Appendix 3.5).

⁴² <https://www.liverpool.ac.uk/aqsd/quality-and-enhancement-framework/>

Soft skills – simulated client interactions, reflective portfolios, clinical skills diaries, self and peer review of contribution to group tasks, outbreak investigations, LiftUpp, written communication assessments and PCAs.

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.

Processes for ensuring the advertising and transparency of the assessment criteria/procedures

Students are provided with an overview of assessment processes and requirements including the format and weighing of assessments via the SVS's student site on the VLE. This includes the programme specification (Appendix 3.1), Student Handbook (Appendix 7.1) and links to the University assessment policies (Appendix 1.3). In addition, incoming first year students attend a session detailing this information, which is recorded and made available to all years via the VLE.

Specific guidance for in-course assessment tasks and exams are provided via cohort specific year course page (VSCI100-500) on the VLE in advance of assessments. Clear instructions are provided ahead of time and, where appropriate, marking rubrics are available to all students prior to assessment. In addition, online discussion boards are provided to ensure students can communicate with staff regarding any queries they have and all students within a cohort can access information provided.

Students are provided with information regarding processes for applying for extensions to or exemption from late penalties for in-course assessments alongside the process for application for extenuating circumstances in exams via the VLE. These follow the University's Code of Practice on Assessment (Appendix 1.3). Students are additionally informed of the use of a 'Fit-to-Sit' policy for clinical students which has implications for rotations and final exams. This is outlined in Appendix 1.3 Appendix M section 1.4 and is presented to the students by the year lead and assessment officer prior to the start of rotations. This information is also provided in their clinical studies handbook (Appendix 8.1) accessed via the VLE.

Processes for awarding grades, including explicit requirements for barrier assessments

The SVS awards grades to students in keeping with the University Code of Practice on Assessment (Appendix 1.3) and programmes are governed by Ordinances 50, 51 and 52 (Appendix 1.3, Relevant Ordinances). The Code of Practice on Assessment provides "expectations in relation to the design, implementation and review of assessment strategies for all taught programmes of study by those who have responsibilities for these". Where the Programme deviates from the Code of Practice on Assessment or its appendices, this is highlighted in the Student Handbooks (Appendix 7.1, 8.1).

Barrier assessments are present at the end of each year of the programme and specific requirements for progression are provided in the student handbooks (Appendix 7.1, 8.1) and programme specification (Appendix 3.1). Alongside summative exams, in-course assessment tasks contribute to progression of students for each year of the course. All in-course assessments are marked according to marking rubrics, with specific assessment criteria published in advance of the coursework submission date. Assessment criteria are directly linked to the learning outcomes relevant to the subject being assessed.

Clinical development is monitored during rotations using a purpose-designed clinical development system, LiftUpp. By focusing on generic outcomes (“professional attributes”) that map directly to day-one competences, the system can integrate and triangulate data across multiple different rotations. This is crucial to transparency in decisions, showing student attainment of the required outcomes throughout the clinical stages of the course. Further, the robustness of this developmental monitoring, especially when combined with other assessments, identifies areas for focused development. In addition, students must complete PCAs to a level expected from a day one graduate, with students being allowed two opportunities to perform the PCA within a designated rotation week. Students must complete all PCAs and have appropriate development as judged by LiftUpp feedback to be eligible to sit final summative exams (see also Standard 3.1). Repeat rotation weeks are available to students who require further development of skills or who have not yet demonstrated competence in PCAs.

Processes for providing students with feedback post-assessment and guidance for improvement

The SVS provides students with opportunities for feedback throughout the course, these approaches include verbal feedback in teaching sessions, individual feedback of formative assessment submissions, cohort feedback on assessment submissions, self-assessment, peer-assessment and ongoing feedback on clinical rotations via LiftUpp. Feedback on continuous assessment is provided via the VLE within three working weeks in keeping with the Code of Practice on Assessment (Appendix 1.3 appendix N). All students can request feedback on summative exam performance, any failing student is provided with personal feedback from their Year Lead or exam co-ordinator on areas of strength and weaknesses including knowledge, practical ability and exam technique in order to enable development prior to resit.

For years 1-3, a formative assessment period is run to give students feedback on their performance, and to highlight areas of strength and weakness, prior to the summative assessments. The formative assessments do not contribute any marks to the final assessment mark, but do give students the opportunity to experience the exam process. Following marking, scripts are made available to students in feedback sessions including generic feedback from markers and specific personal feedback in addition to individual student grades with comparison to cohort averages.

Description of the appeal processes against assessment outcomes

Should a student have a query regarding feedback on individual piece of work they would in the first instance be directed to the member of staff in charge of administering the assessment, in order to clarify whether there is an issue. Students who wish to appeal are directed to the Programme Director and Assessment Officer in order that the procedures can be clarified to the student.

In keeping with the Code of Practice on Assessment (Appendix 1.3 appendix F), Students may submit a Section One appeal against an individual assessment mark, LiftUpp panel decision or termination of studies on the grounds of academic integrity, or a Section Two appeal against the non-award of a degree or award of an exit degree, however these appeals cannot relate to academic judgement. In these cases, students are directed to the SVS student administration office, University’s Academic Compliance Team and Liverpool Guild of Students for guidance and support and formal process is initiated outlined in Appendix 8.2.

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.

Data on student performance in practical skills and competences are reviewed alongside other assessment data, graduate surveys and employer surveys as well as forming part of the annual and periodic review cycles (see Standard 1.4 and Appendix 1.2). If issues with a particular competency are identified, recommendations for changes to the curriculum are made.

The SVS Assessment Policy is authorised by the SVS Board of Studies (Appendix 1.1), and is available to staff via the VLE. Details of the policy pertinent to students are available via the Student Handbook (Appendix 7.1). The Veterinary Education Management Group is responsible for day-to-day implementation of the Assessment Policy and individual Year Leads are responsible for dissemination of decisions based on this policy to teaching staff and students (Appendix 1.1). Any changes to the overall design or implementation of assessment would be proposed by the Senior Leaders Group and ratified by Board of Studies and the SVS Curriculum Board before approval by the FHLS SP, FAQSC and AQSC (see Standard 1.4 and Appendix 1.2).

Alongside provision of information to students, via the VLE, students are also informed of policy via student year reps at SSLC and have representation on School Committees. External examiners are provided with access to the SVS Assessment Policy via the VLE and are additionally provided with responses to their reports including updates to policy based on this.

Description of the link between learning outcomes and assessment design

The Code of Practice on Assessment states summative assessment should provide “a measure of achievement or failure in respect of a learner’s performance in relation to the intended learning outcomes of the programme of study” and recognises that a range of assessment techniques should be utilised in order to ensure assessments are appropriate to learning outcomes and teaching and learning methods. In line with the Liverpool Curriculum Framework Hallmark of authentic assessment (see also Standard 3.2), the SVS utilises constructive alignment to allow appropriate assessment of learning outcomes attached to assessment question within our exams database, these learning outcomes are then further mapped to competences described by accrediting bodies within the programme specifications.

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.

System to certify student achievement of learning outcomes

For summative exams, papers undergo internal and external review prior to final approval in order to ensure appropriate standards of assessment linked to learning outcomes. The raw marks are standard set, question and paper statistics are performed and analysed and then papers are internally moderated prior to checks by external examiners. The scoring range for papers is typically 35-85% (pass mark 50%, credit mark 65%, distinction mark 75%), and typically cohort performances at first attempt are around 5% fail, 55% pass, 28% credit, 12% distinction, although in earlier years the fail rate is slightly higher.

In-course assessments are scored based on the published rubric and in line with University standards; any piece of work contributing at least eight credits is internally moderated. Total marks

for in-course assessments in years 1-3 are standard set with a fixed pass mark of 50%. Feedback on assessment processes is provided by year leads and external examiners at the Board of Examiners Subject Review Board, prior to ratification of marks at Progress Boards.

Strategy to encourage students to take an active part in the learning process

From day one of the BVSc students are prepared for self-efficacy via a Study Skills strand of learning including workshops on workload management and improving focus. Students are guided on the difference between teaching in the didactic sense and facilitation of active learning, which they will experience on the BVSc course. These sessions guide students on resources, approaches to study and methods to work efficiently and maximise wellbeing.

Students are expected to take an active role in their learning throughout the BVSc course with some clear examples highlighted below:

Clinical Skills: Within years 1-3 Clinical Skills, students learn 8-10 skills per year. They are provided with online resources including notes, image guides and videos preceding peer-assisted learning sessions in the clinical skills lab. Students complete a reflective diary and formative Objective Structured Preclinical Exams, with students act as peer assessors under staff supervision. This allows students to reflect on their knowledge and skills alongside improving their understanding of assessment practices.

Outbreak investigation: In year three, a series of outbreak scenarios are released to the students at the start of the semester, who work in small groups to “manage” the outbreak. Periodically, real-time information is released to the student groups, and they respond to the changing situation, feeding back to their facilitator on the investigative processes used and what they learned about the diseases involved. Each group presents an investigation dossier to a panel of experts including Animal and Plant Health Agency Staff, and other students, detailing their approach to outbreak management.

Communication Skills: From year one, SVS students undertake communication skills training including written and verbal communication. In year one students are introduced to a consultation model and throughout years one and two undertake peer-role play providing each other with constructive feedback, prior to personal reflection within their student portfolio and consultation with an actor providing feedback on development points. The students use this feedback on EMS for communicating with clients and further develop their skills. In years 3-5, students undertake more challenging scenarios with peers and actors while taking charge of consultations with clients on rotations and gaining feedback via LiftUpp.

Portfolio: Students on the BVSc course complete a reflective online portfolio which is linked to the ESEVT and RCVS Day One Competences and develops as the students progress each year. This is assessed on students’ ability to recognise and reflect on skill development and formulate plans for development. Students also reflect on formative exams and any professionalism concerns raised with them, to enhance their professional development. We also have a specific Resitter Portfolio for students who did not progress following summative assessments. Students consider barriers to learning, development of learning skills and evaluation of their mindset before meeting with their academic lead and personal tutor to discuss personal development and support needs.

LiftUpp: During clinical rotations students are given development points on skills linked to ESEVT and RCVS Day One Competences. Students are scored indicating their level of independence (D= dependent, PD = partially dependent, I = independent), and provided with feedback for development. This approach allows students to take control of their learning from day one of rotations, in order that they meet the required standard prior to their finals. The students’ development is reviewed by a panel, at the end of each rotation block, and, should any students be struggling with development of specific skills, additional training is offered (see Standard 3.1).

Standard 8.5: Methods of formative and summative assessment must be valid and reliable and comprise a variety of approaches. Direct assessment 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 quality control of the student logbooks in order to ensure that all clinical procedures, practical and hands-on training planned in the study programme have been fully completed by each individual student.

In line with the University Code of Practice on Assessment, the SVS has a clear process to ensure valid and reliable assessment, with internal and external review prior to sign off. Staff are provided with guidance on responsibilities regarding marking and moderation of assessments via the Assessment Policy and during the marking period. Summative examination papers are moderated and any continuous assessment tasks representing over 20% of the assessment burden (eight credits or more) have 15% of scripts moderated by the assessment lead or nominated academic. Should marking be found to be inconsistent, all items are remarked. Double marking is employed for year three research projects, where a large number of assessors are involved in marking student submissions.

All assessments are subject to QA processes under the remit of the Head of Undergraduate QA. External examiners system contributes to this activity. They attend Subject Review and Progression Boards followed by submission of report to the FAQSC, to which a response is submitted by the SVS. In addition, assessment is considered in the annual PDCA cycle the ASAP (Appendix 1.2) collating feedback from all stakeholders.

Assessment of competences includes OSPEs, PCAs, ongoing feedback on LiftUpp reviewed by the LiftUpp panel after each rotation block, and the undergraduate portfolio, with opportunities to repeat rotations if required. LiftUpp allows feedback on specific competencies, and also allows teachers to specifically note observed tasks completed or skills achieved, serving as clinical logbooks. A full list of tasks/skills assessors might observe can be found in Appendix 3.4. All PCAs and learning outcomes related to LiftUpp must be met prior to final year exams and students are unable to graduate without meeting all the competences in their portfolio. The learning outcomes for these assessments are directly mapped to Day One Competence as defined by Accrediting Bodies.

Comments on Area 8

- Clear communication of expectations to staff and students
- Variety of appropriate assessment methods to ensure authentic assessment
- Clear QA processes
- Developmental approach to demonstration of competence on rotations
- Portfolio which builds to demonstration of non-technical competences
- We are aware that EAEVE are producing an example logbook and we will review our methods alongside this example

Suggestions for improvement in Area 8

- Development of ongoing assessment of competency in Y1-3 e.g. LiftUpp for clinical skills
- Development of database which clearly maps LOs to D1Cs and EAEVE

Area 9. Academic 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 training² (including good teaching and evaluation practices, learning and e-learning resources, biosecurity and QA procedures) must be in place for all staff¹ involved with teaching.

Most academic staff (calculated as FTE) involved in 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 Veterinary School and University are strongly committed to professional development. Training for a teaching qualification is obligatory for all new academic staff, and masters' level Postgraduate Certificate Academic Practice PGCAP training is offered at the main UoL Campus. The committee structure within the school ensures that up-to-date information about all procedures relevant to our students flows through the departments to the staff.

All staff teaching on the veterinary programme must undergo teacher training. The programme followed is determined by their level of involvement with the curriculum:

- Junior staff (e.g. interns / residents) undertake a bespoke tailored teacher training course that qualifies them as 'Associate Fellows of the Higher Education Academy'.
- All senior staff (lecturers and above) must at a minimum undertake a University delivered teacher training course (Post-graduate Certificate in Academic Practice) that qualifies them as 'Fellows of the Higher Education Academy'.
- Other staff with a particular interest in pedagogy and education can also take further training courses (such as diplomas and masters level courses).

Staffing for a particular area is the responsibility of the Head of Department. If they identify the need for new staff then that is discussed at VSET and a case produced to be presented by the Dean to ILT and FLT. Once a post has been agreed and put on the staffing plan replacements for staff leaving or retiring are approved at ILT. VSET discuss if a change in staffing provides an opportunity to alter workload or responsibilities between posts and departments. The direct work area, grade and qualification needed for a post are determined by the HoD with reference to the UK Higher Education Statistics Agency role profiles for grades of staff and other posts within the VEE.

Standard 9.2: The total number, qualifications and skills of all staff involved with the programme, including teaching staff, ‘adjunct’ staff, technical, administrative and support staff, must be sufficient and appropriate to deliver the educational 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, residents, interns or other postgraduate students, adjuncts or off-campus contracted teachers.

Table 9.2.1. Academic staff** of the veterinary programme

All staff tables are a snapshot of FTE taken at 1st July

Type of contact	2021-2022	2020-2021	2019-2020	Mean
Permanent (FTE)	104.1	86.5	89.05	92.3
<i>Temporary/ Fixed term Contracts:</i>				
Interns (FTE)	20	18	15	17.7
Residents (FTE)	30	34	34	32.7
PhD Students (FTE)	35	21	33	29.7
Practitioners (FTE)	2	2	2	2.0
Lecturer (FTE)	4	1.2	3.6	2.9
Senior Lecturer (FTE)			1.4	0.5
Professor			0.12	0.0
University Teacher (FTE)	1			0.3
Vet Clinical Microbiology Trainee (FTE)	1	1	1	1.0
Veterinary Surgeon (FTE)		1	0.8	0.6
MPhil			5	1.7
Total FTE	194.2	164.7	185.0	181.3

Table 9.2.2. Percentage (%) of veterinarians in academic staff

Type of contact	2021-22	2020-21	2019-20	Mean
Permanent (FTE)	91	90	90	90
Temporary / Fixed Term Contracts (FTE)	100	100	100	100
Total (FTE)	95	95	95	95

Table 9.2.3. Support staff of the veterinary programme

Type of contact	2021-22	2020-21	2019-20	Mean
Permanent (FTE)	132.2	139.9	139.0	137.0
Temporary/ Fixed Term Contracts (FTE)	6.7	10.0	11.9	9.6
Total (FTE)	139.0	150.0	150.9	146.6

Table 9.2.4. Research staff of the VEE

Type of contact	2021-22	2020-21	2019-20	Mean
Permanent (FTE)	7.3	1.7	1.7	3.6
Temporary/ Fixed Term Contracts (FTE)	16.5	2.8	2.2	7.2
Total (FTE)	23.8	4.5	3.9	10.7

Planned ADDITIONAL Staff Investment in terms of FTE over the next 3 academic years

Planned Additional Staff Investment in FTE	<i>Planned Increased FTE in 2022-23</i>	<i>Planned Increased FTE in 2023-24</i>	<i>Planned increased FTE in 2024-25</i>
Equine Clinical Science	10.4	0	0
Livestock & One Health	7.2	2	0.83
Small Animal Clinical Science	24	0	0
Vet Anatomy, Physiology & Pathology	8.5	1	0
IVES Professional Services	3.2	0	0
TOTAL Increase Planned FTE	53.3	3	0.83

Description of the formal programme for the selection and recruitment of the teaching staff and their training to teach and assess students (including continuing education)

Recruitment processes are subject to UK law. Advertisement is open and transparent. Suitably qualified individuals may be approached directly for roles which are difficult to recruit to: for example, all ECVIM Diplomats in Oncology may be approached if an oncology role is coming up. Targeting is based entirely on the skills and qualifications required, usually on published lists of for example, specialist soft tissue surgeons. The SVS Equality and Diversity Committee has championed an open and supportive culture in the School, both across the staff and undergraduates alike. All staff are required to undertake Diversity and Equality training at least every three years. All recruitment panel chairs and unit leads have had recruitment training.

External teachers attend a workshop on teaching delivery. They also complete an online course on 'Diversity & Equality'. External teachers with a significant teaching contribution have access to the University's VLE which contains numerous online training courses. In addition, by prior arrangement, they are entitled to attend some of our in-house CPD courses and/or University programmes.

Description of the formal programme for the selection, recruitment and training to perform their specific duties (including continuing education) of the support staff

The procedures for hiring support staff are analogous to those for academic staff above, and are overseen by Professional Services administrators.

Description of the formal rules governing outside work, including consultation and private practice, by staff working at the VEE

External consultancy work is regulated and supported by the university and can be undertaken by acting through the university with professional services support, or independently. Consultancy is regulated through an online system, and the university requires that it be notified by anyone undertaking consultancy. Income can be allocated to a department consultancy or staff research account or taken as salary by negotiation. Each application must be approved by a line manager. For academic staff this is the Head of Department.

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 any systems of reward for teaching excellence in operation.

Academic positions must offer the security and benefits necessary to maintain stability, continuity, and competence of the academic staff. Academic 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.

Description of the peculiarities of the work contract for academic staff (e.g. permanent versus temporary, balance between teaching, research and services, continuing education, ...)

The University and the SVS has a developed structure for promotion on both the Teaching and Research (T&R) and Teaching and Scholarship (T&S) tracks. This pathway has been successful with promotions all the way through to Professorship level on both tracks.

All academic staff are engaged in research and scholarly activity, whilst some undertake either clinical work or pedagogic research. New staff are required to achieve a teaching qualification within 3 years of appointment. Individual feedback from staff is gathered formally through the annual professional development review (PDR) process.

Different clinical units have their own mechanisms for staff to determine and request teaching resources. Further discussions with staff are held through regular Town Halls, which include a Q&A session to enable staff to air their views about any VEE matters. Periodically, the SVS or University hold staff surveys to gather opinions. Informal staff feedback during course delivery is also collated by the veterinary education team, subject leads and clinical unit leads.

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 academic 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 academic 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.

The professional development of academic staff is overseen by the departments, and for support staff this is the responsibility of Professional Services. A Professional Development Review (PDR) is conducted annually for all staff, both academic and support, and is delivered by department heads or Professional Services line managers. Mentoring requirements are determined by the PDR, and mentors or appropriate professional development opportunities are identified and assigned accordingly. The department head or line manager are responsible for ensuring these development plans are aligned with appraisal and promotion procedures.

The PDR provides the staff member with an opportunity to reflect on all aspects of their role, over the previous academic year (including teaching, research and scholarship, and leadership), ensuring staff are equipped with the knowledge and skills necessary to meet agreed objectives and develop in their role. Whilst the central focus is on the individual staff member, the PDR process is an useful tool to enable the SVS and university to review its own activities, thus contributing to QA.

Academic positions are designated either Teaching & Scholarship (T&S) or Teaching and Research (T&R), with these contracts representing two different career choices and career

pathways, each with an underpinning requirement of excellence in practice. The employment contracts are the same for both career paths, permanent or fixed term, full time or part time, however the job plans are different. The split of work between the two contracts is broadly as follows:

- T&S deliver around 70% teaching plus Admin and Scholarship for the remainder, Scholarship being in terms of pedagogical research, improving teaching practice etc.
- T&R deliver around 30% – 50% teaching, plus Admin / Dept. duties plus around 50% – 60% Research.

In both cases teaching may include supervision of student projects, lectures, tutorials etc. The profiles for the various T&R and T&S grades on the UoL intranet and show the expectations at each level.

Academic Staff Promotion

All promotion is dependent upon teaching, research, scholarly activity, and collegiality, with leadership and management where appropriate. There is also ability for individuals to compensate between activities to allow building strong teams based on individual strengths. Applications for progression are open annually and staff may apply once they have been in post for more than one year. The application is made by the individual with the support of the appropriate unit lead and assessed by a FHLS panel up to Senior Lecturer level. For promotion to a Chair the assessment is at University level with the panel chaired by the Vice-Chancellor. The process includes an interview. The Veterinary School's progression cases have been successful in around 90% of cases over the last 5 years.

Tenure

Appointments at Lecturer level (and Tenure Track Fellow) are probationary, and subject to Confirmation in Appointment (CiA), similar to tenure-track. For CiA, academics on teaching and scholarship track must demonstrate appropriate performance in learning and teaching, knowledge exchange, contribution and engagement (including clinical engagement), research, and personal development. All staff must have a clear plan for ongoing development in line with UoL strategy. Appointments at Senior Lecturer and above are generally permanent. Short term contracts are only awarded for maternity or sickness cover: most posts are permanent and therefore offer security.

Standard 9.5: A system for assessment of teaching staff must be in operation and must include student participation. Results must be available to those undertaking external reviews and commented upon in reports.

Individual teachers who teach on the classroom-based phase of the course (years 1-4) receive an Individual Teaching Evaluation from students every two years, alternating with Peer Observation of Teaching. Data are used to support teacher development and enhance teaching quality alongside subject-wide reviews, with staff scoring poorly being supported through the peer observation system to improve their teaching

The individual teacher evaluation: has two Likert-type sections; an evaluation section to allow ranking in terms of pedagogical skill and a development section to assess and support individual skill progression, plus free text questions to identify particular successes and challenges. Teaching staff identify a session or topic which they wish to have evaluated and book an evaluation via an online form. The Administration Team Leader sets up and sends the survey to the students at the requested time, and results are returned to the individual teacher and their line manager for use in their annual professional development reviews.

Teaching on clinical rotations is not evaluated in this way, as the contact is small-group and staff often teach intermittently so may only contact a few students in a given time period. Instead, the course evaluation feedback is obtained week by week, so subject leads and teaching staff can identify which small team of staff the feedback pertains to.

Peer observation of teaching: Teaching staff across all years, including clinical rotations, undergo peer observation of teaching every two years. There are currently 50 academics trained to carry out peer observation of teaching and in the past two years 44 academics have undergone peer observation of teaching and 9 have undergone individual teacher evaluation. However a further 94 academics have engaged with the process and will be undergoing observation in the coming year. These numbers have been low in the previous year reflecting the move to online teaching during COVID and the additional work burden but there has been a good response to a reminder this year regarding the system and expectation that all staff will participate this year. The feedback from the observations are confidential. Staff can share the information with line managers as part of the annual PDR.

Students also evaluate the relationship they have with their personal tutors each year, with an end-of-year questionnaire. Results from this are returned to the individual staff member.

For both the individual teacher evaluation and the tutor feedback, anonymised results are retained and analysed by the Director of student experience at the end of each year to identify trends and training needs.

Comments on Area 9

The SVS has very recently been assigned a significant number of new positions that leave us well-resourced to deliver the BVSc programme. The expectation for all academics to hold a teaching qualification give a high level of assurance in the quality of our delivery.

Suggestions for improvement in Area 9

Concerns remain amongst staff regarding clarity around promotion and advancement criteria. SVS is addressing this by proposing bespoke criteria that recognize the unique circumstances of the VEE.

Area 10. Research programmes, continuing and postgraduate education

Standard 10.1: The VEE must demonstrate significant and broad research activities of staff that integrate with and strengthen the veterinary degree programme through research-based teaching.

Description of how the research activities of the VEE and the implication of most academic staff in it contribute to research-based veterinary education

Veterinary research is a key area of activity within the FHLS. The VEE ranked the top UK veterinary school return for quality of research in the Unit of Assessment 6 (Agriculture and Veterinary Science, UoA6) of the 2021 Research Excellence Framework (REF). Case studies showing the impact of our research also achieved the highest ranking including SVS research on equine laminitis, canine obesity and veterinary antimicrobial prescribing practices, demonstrating how our research informs and changes veterinary clinical practice. Research income for 2018-2021 was € 3,058,378.79 from research councils, charity and industry funding (Table 2.1.2) and from 1st July 2019 until 2022 there have been 726 journal articles, 5 book chapters and 1 book published by SVS staff (Appendix 10.1). Our research activities include international, collaborative and multi-centre studies and conducting veterinary interventional studies including clinical trials. Staff teaching on the BVSc curriculum are represented on a number of funding advisory boards (e.g. BBSRC, Horse Trust, Morris Animal Foundation, Petplan Charitable Trust, Pet Savers), journal editorial boards (e.g. Veterinary Journal, Equine Veterinary Journal), national advisory panels and organising committees of international veterinary research meetings. Multiple clinically-active staff also concurrently supervise PhD and MPhil PGR students.

All academic staff are expected to contribute to research and staff within the SVS undertake a range of interdisciplinary and translational veterinary and pedagogical research (<https://www.liverpool.ac.uk/veterinary-science/research/>). This enables staff to embed research informed teaching within the curriculum from Y1-5 and supports student, intern and resident research projects e.g. use of Small Animal Veterinary Surveillance Network (SAVSNET) data. Internal research support is provided at Institute level including competitive internal research funding rounds and use of departmental budgets to support smaller clinical research projects. Research communications are disseminated within weekly institute (IVES) and SVS newsletters. Departments hold weekly journal clubs and seminars, enabling junior staff to develop their portfolio of research skills including critical appraisal of the literature and scientific research presentation skills. Monthly interdepartmental seminars include veterinary and allied research presentations given by UoL and external speakers and additional Institute research talks are hosted (online / in-person).

Table 10.1.1. List of the major funded research programmes in the VEE which were ongoing during the last full academic year prior the Visitation (AY*) (this table may be substituted by a VEE list of ongoing research projects)

<i>Scientific topics:</i>	<i>grant/year (€)</i>	<i>Duration (Yrs)</i>
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See Appendix 10.2 for table of ongoing research grants

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

How undergraduates are made aware of the importance of evidence-based medicine, scientific research and lifelong learning

Through teaching on Epidemiology and Public Health in years 1-3, students are introduced to a range of research methodologies, epidemiological concepts and statistical tools and through small group tutorials can actively apply what they have learnt by working through real world problems and disease outbreak scenarios. In addition, students are introduced to different types of study design, how to critically review papers and to recognise the role of clinical trials in veterinary practice, key design features and how to critically appraise such trials. Students gain an understanding of evidence-based medicine, the hierarchy of information and practice using reporting guidelines for published studies, thus enhancing their skills in evidence-based medicine and emphasizing its importance.

The programme offers a wide range of research opportunities throughout the curriculum which allow the appreciation of the role and challenges of research in veterinary medicine and in the allied sciences. The broad aim of the research skills stream and conducting research project within the BVSc curriculum (Y2 & Y3) is to foster an appreciation of the role and value of research and of a scientific approach to study.

How undergraduates initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers

For research projects, students are assigned supervisors in year 2 and in partnership with their supervisor, they undertake a literature review in semester 2 around a mutually agreed topic which is worth 10 credits. This involves extensive literature searches, reading and interpreting scientific papers, critical evaluation of published data and writing scientific reports. To support the literature review, students attend lectures, seminars, workshops in semester 1, which helps them with; effective information searching, managing references and avoiding plagiarism (library's [KnowHow](#) team⁴³); scientific writing and constructing academic arguments; How to write a Literature Review; being informed about additional Intercalation and summer studentship opportunities; journal impact factors and peer review processes; research methods.

In Year 3 students undertake a supervised research project (systematic review, clinical audit, data or observational study or wet lab project). For systematic reviews these are supported through online resources, including a template ensuring adherence to internationally acceptable guidelines for systematic reviews. Here students are further exposed to the research areas (clinical or veterinary allied areas) of the supervisory staff (~100 supervisors, of which ~60% are clinicians) and allows them a greater appreciation of research being undertaken across SVS and allied departments. Students are provided with dedicated time to undertake their projects as well as a budget to support their research work. Students must produce a project report based around the systematic review template and/or equivalent to a short scientific paper (~3000-4000 words), which includes a lay abstract. Students are provided with formative feedback before submission of the final report. The project is worth 15 credits, with 12 of these coming from the project report and three from their approach to the project. There is no final graduation thesis after the 5th year examinations.

How undergraduate students are offered to participate to research programmes on a non-compulsory or compulsory basis

⁴³ <https://libguides.liverpool.ac.uk/knowhow/home>

Students can undertake vacation studentships. Such studentships for veterinary undergraduates are extremely popular and are funded by INSPIRE (Academy of Medical Sciences), Wellcome Trust, BBSRC, charities (e.g. Petplan, Animal Welfare Foundation, Beaufort Cottage Educational Trust) and industry. These enable student to gain experience of undertaking a defined and more intensive research project, writing up the results and often provide data for conference presentations and/or publications. These research projects can take place across the wider UoL research environment and range from research tasters (3 weeks) to longer defined research projects (up to 10 weeks). Mentor events allow students to meet potential supervisors and internal applications requiring input for both student and supervisor are awarded on a competitive basis reviewed and ranked by committee. Applications to external bodies are also supported by supervisors.

Since 2016 the University has used part of its Wellcome Trust institutional support fund to support vacation studentships of 8-10 weeks and this has been matched by internal SVS funding leading to increased availability. Since 2016, 114 students have participated in one of these projects supervised by over 60 different staff members including over a third of clinical teaching staff and over 50% of staff conducting basic science research ensuring wide exposure to a variety of research environments. Two members of academic staff oversee the vacation studentship scheme, promoting them to staff and students and by organising the application process and awarding of the studentships.

For the INSPIRE activities, these are organised by a student committee consisting of representatives from each year and a postgraduate member with the two academic leads. There is a portfolio of activities which are advertised to the students via the website, email and through social media. These activities include short taster studentships, mentoring events, researcher talks, research summer school (4 day non-residential), public engagement training and events, abstract writing workshop, veterinary undergraduate research conference, and travel awards. The set of activities are designed to take the student all the way through the research experience. This starts with understanding what research is and taking inspiration from veterinary researchers through access to talks and mentoring events, to developing skills through the summer school, undertaking a studentship, writing an abstract for a conference and presenting their work at national and international conferences supported by our travel awards. In the past 4 years (since Liverpool has had an INSPIRE grant) our students have presented their research at the UK Veterinary Undergraduate Research Conference, British Small Animal Veterinary Association conference, British Equine Veterinary Association conference, Osteoarthritis Research Society International, Metabolomics conferences for example. Some students have also been co-authors in peer reviewed journals or published their work in the University of Liverpool Journal '[Insider Imprint](https://www.insiderimprint.com/)⁴⁴'. In the last 5 years, 46 students have been co-authors on peer reviewed papers through research projects and/or summer studentships.

Since 2018 we have had the following engagement of students with the events described; short taster studentships (34), mentoring events (120 students), researcher talks (150 students), research summer schools (4 day non-residential) (80 students), public engagement training/events (36 students), abstract writing workshops (20 students), veterinary undergraduate research conference (40 students), and travel awards (12 students).

⁴⁴ <https://www.insiderimprint.com/>

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 veterinary degree programme and are relevant to the needs of the profession and society.

Table 10.3.1. Number of students registered at postgraduate clinical training

<i>Training:</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Interns:</i>				
<i>Companion animals</i>	<i>14</i>	<i>13</i>	<i>11</i>	<i>12.6</i>
<i>Equine</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>
<i>Production animals</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0.6</i>
<i>Others (specify)</i>				
<i>..</i>				
<i>Total</i>	<i>20</i>	<i>18</i>	<i>17</i>	<i>18.3</i>
<i>Residents:</i>				
<i>EBVS disciplines (specify)</i>				
<i>Bovine Health Management</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>2.6</i>
<i>Pathology</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>2.6</i>
<i>Veterinary Anaesthesia Analgesia</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
<i>Diagnostic imaging</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
<i>Internal medicine – small animal</i>	<i>9</i>	<i>8</i>	<i>10</i>	<i>9</i>
<i>Internal medicine – large animal</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>1.6</i>
<i>Neurology</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>2.6</i>
<i>Surgery – small animal</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>3.3</i>
<i>Surgery – large animal</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
<i>Total</i>	<i>30</i>	<i>31</i>	<i>32</i>	<i>31</i>
<i>Others (non-EBVS programmes)</i>				
<i>American College of Veterinary Sports Medicine and Rehabilitation (Equine)</i>				
	<i>0</i>	<i>0</i>	<i>1</i>	<i>0.3</i>

Table 10.3.2. Number of students registered at postgraduate research training

<i>Degrees:</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>PhD</i>	<i>35</i>	<i>31</i>	<i>23</i>	<i>30</i>
<i>Others (MPhil)</i>	<i>7</i>	<i>7</i>	<i>5</i>	<i>6</i>
<i>Total</i>	<i>42</i>	<i>38</i>	<i>28</i>	<i>36</i>

Table 10.3.3. Number of students registered at other postgraduate programmes in the VEE but not related to either clinical or research work (including any external/distance learning courses)

<i>Programmes:</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019-20</i>	<i>Mean</i>
<i>Veterinary Professional Studies PgCert/PgDip/MSc</i>	797	770	680	749
<i>Veterinary Business Management PgCert</i>	117	140	115	124
<i>Veterinary Physiotherapy PgDip/MSc</i>	48	45	50	47.7
<i>Diploma of Bovine Reproduction MSc</i>	11	13	10	11.3

Table 10.3.4. Number of attendees to continuing education courses provided by the VEE

<i>Courses:</i>	<i>2021-22</i>	<i>2020-21</i>	<i>2019/20</i>	<i>Mean</i>
Veterinary Professional Studies programme (taken as CPD only)	328	409	586	435
Small Animal “Updates” mini modules (online)				
• Medicine	21	49	21	30
• Emergency and critical care	19	27	47	31
Equine “Updates” mini modules (online)				
• Medicine	15	32	33	26.7
• Practice	26	18	26	23.3
“Updates” CPD mini modules	81	126	127	111.3
Workshops total**	189	0	558	249
Small Animal workshops**	121	0	316	266
Equine workshops**	68	0	108	104
Other workshops**	0	0	96	32

**No in-person workshops were run from March 2020 until October 2021, due to the COVID pandemic. Workshops from October 2020 have also been reduced due to renovation work and reduced space for workshops. From September 2022 normal pre-pandemic activity will be resumed.

Prospected number of students registered at post-graduate programmes for the next 3 academic years

Numbers on all PGT programmes are predicted to remain steady. A change in the Veterinary Business Management programme, starting September 2022 means that numbers on this programme may slightly reduced. Numbers on Continuing Professional Development (CPD) workshops are predicted to increase back to pre-pandemic levels. Practical workshops were cancelled during the pandemic, so the numbers above are artificially low (2019-20 is closest to pre-pandemic levels, though this academic year also had 4 months of workshops cancelled)

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

Interns and residents work within services in both hospitals and the Farm Practice and Herd health rotations groups. They are employed as staff to teach with time and expenses paid to obtain a postgraduate clinical qualification, rather than on a stipend as a student. They work with undergraduate students but all clinical rotations groups are under the supervision of academic staff who will determine who is most appropriate to undertake a procedure depending on the complexity and the learning objectives of the week. Students feedback anonymously through a focus group so any conflicts are identified and issues discussed.

Description of how the continuing education programmes provided by the VEE are matched to the needs of the profession and the community

The Veterinary Postgraduate Unit offers four postgraduate programmes and a variety of online and in-person CPD courses. The continuing education programmes and courses on offer closely match the needs of the profession. The postgraduate programmes offer opportunities for students to develop their professional skills and gain a qualification recognised by the RCVS for Advanced Practitioner Status in the UK, veterinary profession, employers and clients. The non-credit bearing CPD offered allows veterinarians to develop new practical skills in a safe environment and gain certified CPD hours in a flexible way to achieve their annual RCVS CPD requirements. We offer 3 programmes for practicing veterinarians or veterinarians engaged in veterinary business management, and one for physiotherapists, and a series of short courses called mini modules aimed at more advanced practicing veterinarians. For more detail see Appendix 10.3.

The Veterinary Postgraduate Unit also offers a variety of in-person veterinary CPD workshops throughout the academic year in equine, small animal and professional practice topics. These are aligned with the VPS programme modules to offer practical skills workshops, with low student:teacher ratios, to support the online teaching in these modules, as well as offering practical skills and teaching to veterinarians who are not enrolled on the postgraduate programmes. The Covid-19 pandemic has meant that the numbers of in-person workshops held in the past three years has been significantly reduced. A usual pre-pandemic year would see the VPU developing and offering approximately 45 different workshops across a year, with upwards of 800 delegates attending, and we anticipate returning to these pre-pandemic levels in 2022/23.

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 veterinary teaching programmes.

Description of the mechanism used by the VEE to ensure that its research activities contribute to research-based education.

For the research stream (Y2 literature review and Y3 research project), both subject leads receive feedback from students and staff and, in consultation with the year leads and the appropriate Pre- or Para-clinical Education Committee, discuss any changes to provision of these in response to feedback. In addition, for QA both the literature review and research project are reviewed by an external examiner, who is given access to all reports. They will also provide a written report and a response by the subject leads to any issues or concerns they raise.

Through student projects and summer studentships, these activities not only develop research skills within our students, but also provide further opportunities for our clinical staff to engage in research, and help further develop their research portfolio, which is important for promotion.

For staff promotion (<https://www.liverpool.ac.uk/intranet/hr/my-hr/annualreview/>) there are different expectations around roles depending upon whether staff are on T&R or T&S contracts in respect to research. However, all staff are expected to undertake some research, which may include pedagogical research. Staff are supported for promotion through their annual PDR process with their line manager. In addition to further support staff development, all staff are eligible to apply for funding towards research pump priming activities, to support attendance at conferences, or training events/workshops to support their research work and research network development.

In respect to educational research, Liverpool Veterinary Education Research Group (LIVERG) was formed to promote educational research and CPD among staff. They lead on a wide range of educational research projects the results of which inform teaching practices.

Description of how (procedures) and by who (description of the committee structure) research, continuing and postgraduate education programmes organised by the VEE are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Postgraduate taught (PGT) programmes are governed by the University of Liverpool in the same way as undergraduate programmes and both the Curriculum Board and Strategy Group are shared UG and PGT committees with UG and PGT committees, exam boards and subcommittees feeding into them.

Comments on Area 10

The SVS benefits from a top national research performance ranking, and a broad portfolio of biomedical research excellence across the university. Integration of the SVS within IVES offers unique one-health opportunities for our students, and student interest in research is extensive.

Suggestions for improvement in Area 10

Clinical research remains challenging for our clinicians given limited availability of time and externally funded support. The SVS is specially targeting this issue for change as part of its new strategic plan.

ESEVT Indicators

Excel spreadsheet sent separately and also embedded as Appendix 11



ESEVT Indicators

Name of the Establishment:		University of Liverpool			
Name & mail of the Head:		Paul Lunn (paul.lunn@liverpool.ac.uk)			
Date of the form filling:		04/08/2022			
Raw data from the last 3 full academic years		Year -1	Year -2	Year -3	Mean
1	n° of FTE academic staff involved in veterinary training	194.2	164.7	185	181.30
2	n° of undergraduate students	897	851	805	851.00
3	n° of FTE veterinarians involved in veterinary training	147	135	134	138.67
4	n° of students graduating annually	150	150	158	152.67
5	n° of FTE support staff involved in veterinary training	119.1	139.1	145.5	134.57
6	n° of hours of practical (non-clinical) training	721.5	721.5	721.5	721.50
7	n° of hours of clinical training	714.5	714.5	714.5	714.50
8	n° of hours of FSQ & VPH training	345.2	345.2	345.2	345.20
9	n° of hours of extra-mural practical training in FSQ & VPH	4	0	8	4.00
10	n° of companion animal patients seen intra-murally	7053	7095	6715	6905.00
11	n° of ruminant and pig patients seen intra-murally	158	150	129	145.67
12	n° of equine patients seen intra-murally	1706	1678	1421	1601.67
13	n° of rabbit, rodent, bird and exotic patients seen intra-murally	618	359	146	374.33
14	n° of companion animal patients seen extra-murally	60	0	240	100.00
15	n° of individual ruminants and pig patients seen extra-murally	5992	8892	11113	8665.67
16	n° of equine patients seen extra-murally	4212	4665	3457	4111.33
17	n° of visits to ruminant and pig herds	180	180	180	180.00
18	n° of visits of poultry and farmed rabbit units	0	0	0	0.00
19	n° of companion animal necropsies	237	147	194	192.67
20	n° of ruminant and pig necropsies	409	405	320	378.00
21	n° of equine necropsies	54	32	67	51.00
22	n° of rabbit, rodent, bird and exotic pet necropsies	361	475	361	399.00
23	n° of FTE specialised veterinarians involved in veterinary training	57	52	52	53.67
24	n° of PhD graduating annually	6	6	14	8.7

The boxes within the red frames must be filled in by the Establishment (the other values will be automatically calculated)



ESEVT Indicators

Name of the Establishment:		University of Liverpool			
Date of the form filling:		04/08/2022			
Calculated Indicators from raw data		Establishment values	Median values¹	Minimal values²	Balance³
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0.213	0.16	0.13	0.087
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	0.908	0.87	0.59	0.319
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0.881	0.94	0.57	0.315
I4	n° of hours of practical (non-clinical) training	721.500	905.67	595.00	126.500
I5	n° of hours of clinical training	714.500	932.92	670.00	44.500
I6	n° of hours of FSQ & VPH training	345.200	287.00	174.40	170.800
I7	n° of hours of extra-mural practical training in FSQ & VPH	4.000	68.00	28.80	-24.800
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	45.229	70.48	42.01	3.220
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	0.954	2.69	0.46	0.491
I10	n° of equine patients seen intra-murally / n° of students graduating annually	10.491	5.05	1.30	9.193
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	2.452	3.35	1.55	0.907
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	0.655	6.80	0.22	0.432
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	56.762	15.95	6.29	50.467
I14	n° of equine patients seen extra-murally / n° of students graduating annually	26.930	2.11	0.60	26.335
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	1.179	1.33	0.55	0.632
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	0.000	0.12	0.04	-0.045
I17	n° of companion animal necropsies / n° of students graduating annually	1.262	2.07	1.40	-0.138
I18	n° of ruminant and pig necropsies / n° of students graduating annually	2.476	2.32	0.97	1.506
I19	n° of equine necropsies / n° of students graduating annually	0.334	0.30	0.09	0.241
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	2.614	2.05	0.69	1.921
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually	0.352	0.20	0.06	0.288
I22*	n° of PhD graduating annually / n° of students graduating annually	0.057	0.15	0.09	-0.031
¹ Median values defined by data from Establishments with Approval status in April 2016					
² Recommended minimal values calculated as the 20th percentile of data from Establishments with Approval status in April 2016					
³ A negative balance indicates that the Indicator is below the recommended minimal value					
* Indicators used only for statistical purpose					

Comments regarding indicator values below or close to the minimal value.

I6 n° of hours of FSQ & VPH training and I7 n° of hours of extra-mural practical training in FSQ & VPH

The value includes sessions whose major theme is FSQ & VPH or that have a large component of One Health. The One Health approach is embedded in the curriculum so the actual coverage is higher. Forensic pathology is in the EAEVE definition of FSQ & VPH and is a specific expertise of the VEE. Students are exposed to forensic pathology approach during Pathology rotation. A further post specifically in VPH has been approved to meet the extra hours or practical training needed for increased student numbers. Rather than 3-4 yr students being taken extra-murally, specimens, such as condemned parts of carcasses, are collected from abattoir and demonstrated to small groups students intramurally scheduled throughout the day so all students see the specimens and time can be given to discussion rather than doing this in noisy abattoir environments. We have only recorded the actual hours within an abattoir but there is a full 35 hour week VPH clinical rotation. During COVID abattoirs operators did not allow staff or students to attend but we could still obtain these samples. The Virtual Abattoir platform was quickly purchased and used for teaching when access was not possible. From April 2022 we were able to recommence one abattoir visit per week to premises which also had food processing facilities. Student feedback will be evaluate to determine if further visits are needed alongside the virtual abattoir platform

I11 n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually

The exotics rotation teaching was brought intramurally and a specific clinic with a dedicated additional staff member was set up within UVP. Due to COVID this has taken longer than planned to gain new caseload but if the figures for 2020-21 are repeated in 201-22, available in July 2022 then the VEE will be over the minimal value for this indicator.

I12 n° of companion animal patients seen extra-murally / n° of students graduating annually

The VEE runs its own hospital and first opinion clinics and does not use extra-mural clinics for core curriculum teaching other than the EyeVet. Due to COVID cases at EyeVet were restricted in 2020-21 and 2021-22 but training was given online for one day and face to face for one day.

I16 n° of visits of poultry and farmed rabbit units / n° of students graduating annually

Due to biosecurity it is difficult for all students to gain access to commercial poultry flocks in the UK. We do not have commercial rabbit farms in the area. Students get poultry handling experience in 4th year during the clinical theory course alongside the poultry disease lectures. Clinical cases of back yard poultry are seen on the farm animal ambulatory clinic and birds in the exotic pet rotation. Pet rabbits are seen in the University first opinion veterinary practice and included in exotic animal handling classes. The disease investigation week have a morning 3 hour session of poultry necropsy and discussion of common diseases and management including vaccination. If students are specifically interested in poultry we have contacts in the industry that can help them gain further experience during pre-clinical and clinical EPT.

I17 n° of companion animal necropsies / n° of students graduating annually

The number of companion animal necropsies was reduced during COVID as the occupancy rate of the post-mortem rooms were capped and only one necropsy was undertaken at a time after cleaning. Numbers have increased in 2021-22 and, if these are maintained, numbers are above minimal value. We are also discussing strategies to increase the proportion of fatal cases seen in the Companion animal VTH that undergo necropsy.

I22 n° of PhD graduating annually / n° of students graduating annually

Before the re-organisation most PhD students were registered in research institutes and not SVS. More PhD students are now being registered in the SVS and this will work through to increased graduations in the next 2 years.

Glossary

(Please use the same terminology and abbreviations as in the ESEVT SOP when possible)

AHEMS - Animal Husbandry Extra-mural Studies – EPT in animal husbandry, non-clinical environments

AQSC – University level Academic Quality and Standards Committee

ASAP - Annual Subject Action Plan

BVSc – Bachelor in Veterinary Science – the degree at the VEE accredited by RCVS to allow graduates to practice veterinary surgery.

CBL - Case-based learning

CDG - Curriculum Development Group

CEMS – Clinical Extra-mural Studies – EPT in clinical environments

CiA - Confirmation in Appointment

DECS - Department of Equine Clinical Science

DSACS - Department of Small Animal Clinical Science

EMS - Extra Mural Studies – term used for EPT by the VEE and RCVS

ESG - Standards and Guidelines for Quality Assurance in the European Higher Education Area

FAQSC - Faculty level Academic Quality and Standards Committee

FHLS- Faculty of Health and Life Sciences

FLT - Faculty Leadership Team

FRCS - Facilities, Residential and Commercial Services

FSLT – University Faculty Senior Leadership Team (Vice Chancellor and pro-vice chancellors)

GDP - Graduate Development Phase – 1st year post graduation required by Royal College of Veterinary Surgeons

HASMAP - Health and Safety Management Profile - a management standard developed for use in Higher Education Institutions (HEI) by the Universities Safety & Health Association (USHA)

IMT – IVES Institute management team

IPR - Internal Periodic Review – review undertaken by all taught programmes by UoL

IVES – Institute of Infection, Veterinary and Ecological Sciences, the Institute within which the VEE sits within the FHLS and then University of Liverpool

IVES HOO – IVES Head of Operations – Professional Services institute lead

LiftUpp – an online development tool

LIVERG - Liverpool Veterinary Education Research Group

LOH - Department of Livestock and One Health

LUVS - Liverpool University Veterinary Society

MSC - Microbiological safety cabinet

OV - Official Veterinarian

PCA - Practical Competency Assessments

PDP - Personal Development Planning

PDR – Professional Development Review of staff annually
PLEH - Philip Leverhulme Equine Hospital
QAA – UK Quality Assurance Agency for Higher Education.
RAWP - Recruitment, Admissions and Widening Participation Committee
RCVS – Royal College of Veterinary Surgeons – UK statutory accreditation body for VEE.
SAF - Student Agreement Forms – agreement with EPT provider
SATH - Small Animal Teaching Hospital
SP - Faculty of Health and Life Sciences Scrutiny Panel
SSLC - Staff-Student Liaison Committee
SVS – School of Veterinary Science, name of VEE in internal documents
T&R - Teaching and Research career pathway for academic staff in the VEE
T&S - Teaching and Scholarship career pathway for academic staff in the VEE
VAPP - Department of Veterinary Anatomy, Physiology and Pathology
VLE - virtual learning environment
VSET – Veterinary School Executive Team
VSC - Veterinary Schools Council – membership corresponds to region 1 of EAEVE
VTS - Veterinary Teaching Suite
UCAS - Universities and Colleges Admissions Service
UEC – Undergraduate Education committee – 3 for different years of the programme
UG - Undergraduate
UKRI REF – UK Research and Innovation Research Excellence Framework – an assessment of research output and impact of UK Universities.
UAP – University Approval Panel
UoL - University of Liverpool
UVP - University of Liverpool Small Animal Veterinary Practice

List of appendices *(which are provided in a separate document)*

The appendices are produced as one document with embedded documents for ease of navigation.

Area 1

- 1.1.A. VEE committee structure for BVSc programme management (core university committees)
- 1.1.B. The interaction between core committees and the SVS executive and Faculty Management
- 1.1.C. SVS taught programme strategy meeting structure
- 1.2. Details of QA Procedures
 - 1.2.1 Student engagement framework
 - 1.2.2 COP on student representation
 - 1.2.3 Annual Subject Action Planning guidance
- 1.3 University and school QA processes

Area 3

- 3.1 Programme specifications
 - 3.1.1 EAEVE Day One Competencies and underpinning knowledge map
- 3.2 Rotation teaching overview
- 3.3 Rotation timetable
- 3.4 LiftUpp skills lists
- 3.5 Practical Competency Assessments PCAs list and descriptions
- 3.6 EMS student agreement forms - Preclinical [A.] and Clinical [B.]
- 3.7 Student EMS (EPT) journal

Area 4

- 4.1 Map of relative campus locations
- 4.2 Map of the Liverpool Campus
- 4.3 Aerial photo of Leahurst Campus
- 4.4 Map of the Leahurst Campus
- 4.5 Map of location of EyeVet extra-mural practice for ophthalmology training
- 4.6 Map of location of farms used for heard health training not attached to the ambulatory clinic
- 4.7 Map of location of abattoirs and food processing facilities used for FSQ & VPH training
- 4.8 VEE's manual for Biosecurity, Health and Safety

Area 6

- 6.1 Clinical skills equipment

Area 7

- 7.1 Student Handbook
- 7.2 Student Progression Decision Framework
- 7.3 Student Agreement
- 7.4 Student Engagement and Professionalism Policy
- 7.5 Professionalism and the student engagement and monitoring process

Area 8

- 8.1 Clinical Studies Handbook
- 8.2 Assessment Appeals Process

Area 9

- 9.1 Current academic staff, qualifications, departmental affiliations, FTE, teaching responsibilities

Area 10

- 10.1 List of scientific publications from VEE's academic staff during the last three academic years
- 10.2 List of research project funding in the VEE ongoing during July 2021-22
- 10.3 Postgraduate taught programmes

Appendix 11

- ESEVT indicator Values in embedded Excel file

THE ORIGINAL

REDBRICK