Visitation to the University of Bristol
24 – 28 November 2014
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Report to the Royal College of Veterinary Surgeons (RCVS) in accordance with Section 5 of the Veterinary Surgeons Act 1966,

and

to the European Committee of Veterinary Education (ECOVE) in compliance with European Directive 2005/36/EC

December 2014
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Introduction

1. This report is prepared for the RCVS in accordance with the provisions of Section 5(1) of the Veterinary Surgeons Act 1966, “for the purpose of securing that the courses of study to be followed by students training to be veterinary surgeons and the standard of proficiency required for registration in the register shall be such as sufficiently to guarantee that persons registered in the register will have acquired the knowledge and skill needed for the efficient practice of veterinary surgery”.

2. The report is also prepared on behalf of the European Association of Establishments for Veterinary Education (EAEVE) for report to the European Committee of Veterinary Education (ECOVE) – a joint committee of EAEVE and the Federation of Veterinarians of Europe.


4. The evaluation was undertaken in accordance with the evaluation criteria defined by the European Association of Establishments of Veterinary Education (EAEVE) agreed at the EAEVE General Assembly in Copenhagen, 8 May 2008, these criteria having been fully incorporated within the RCVS procedures for visitations. The visit was conducted in accordance with the procedures set out in the RCVS document “Criteria and Guidance for RCVS Approval of Veterinary Degree Courses in the UK and Overseas”, November 2011 edition.

5. The EAEVE Standard Operating Procedures agreed in 2008 comprise two stages, the first covering essential standards for a degree to comply with the requirements of the EU Directive 2005/36, and the second covering standards of ongoing quality assurance. Compliance with the first stage enables the degree to be “approved” by ECOVE. Compliance with both Stages One and Two enables the degree to be “accredited” by ECOVE. For continued recognition by RCVS, a veterinary degree needs to meet the requirements of both stages, covering the quality assurance processes for the degree course. However, EAEVE may undertake a second, separate visit to evaluate stage 2 criteria before considering granting stage 2 accreditation.

6. The Visitors were appointed by RCVS and included three nominations from EAEVE, a student, a visitor from the Australasian Veterinary Boards Council (AVBC) with which RCVS has a mutual recognition agreement and an observer from the South African Veterinary Council (SAVC). The Visitors’ remit was to report on the courses of study, staffing, accommodation, and equipment available for training in veterinary surgery, and the other arrangements and facilities for such training in accordance with the EAEVE/RCVS criteria for evaluation.

7. The Visitors were present at the University from 24 – 28 November 2014 inclusive, having attended a briefing session for Visitors on Sunday 23 November. A self-assessment document was prepared by the School and provided to the Visitors two months before the visit. The Visitors were also given access to a number of supporting documents including, external examiners’ reports, committee records, course material, staff CPD records, as well as access to the university intranet.
8. The Visitors toured the facilities at the Bristol and Langford campuses, and stayed together as a group for the majority of the meetings with staff and students. Two Visitors made a visit to the RSPCA (Royal Society for the Prevention of Cruelty to Animals, a charity clinic) in Manchester in the week preceding the visit (21 November 2014). Three Visitors made a visit to the abattoir at Langford on day 2. The Visitors were divided into groups for touring the Distributed Teaching Practices at Shepton, PDSA Bristol and Delaware, and the farm at Bridgwater College’s Cannington Centre.

9. The Visitors attended a meeting on the final day of the visit with the Vice-Chancellor of the University, Professor Sir Eric Thomas and the Deputy Vice-Chancellor, Professor Guy Orpen and gave a summary of their main findings and advance notice of the recommendations that would be passed to RCVS and ECOVE.

10. The Visitors are grateful to the Head of Veterinary School, Professor Joanna Price, and all her staff in the School for their help and hospitality during the visit. The Visitors are aware of the considerable amount of work and time that is taken up by these visitations, and thank the staff from the School and the Institutes who made themselves available. The Visitors would also like to thank the employers and alumni who attended the meetings and the undergraduate and postgraduate students who met with the Visitors each day to talk about the experience of studying at Bristol.

11. The programme for the visit is attached at Appendix 5.
12. The RCVS and EAEVE undertook a full visitation to the University of Bristol in March 2007. The Visitors reported on a number of positive features of the veterinary degree course. Some concerns were identified relating to facilities, however, and the degree was granted ‘conditional approval’ by RCVS Council and ECOVE with conditions to be met over the following two to four years.

13. Three members of the original visitation team undertook a revisit on 28 – 29 October 2009. The Visitors noted that major advances had been made but that some further work needed to be completed. A further two years of conditional approval was granted by RCVS. ECOVE, however, agreed to restore full approval, taking the view that Bristol had made sufficient progress to comply with EAEVE’s criteria for “stage 1 approval” under the two-stage EAEVE evaluation process.

14. RCVS visited Bristol again on 15 December 2011 and noted significant improvements in the areas that had caused concern during previous visits. The University was congratulated on its continued commitment to the development of the School and RCVS restored Bristol to full approval for the remainder of its seven year accreditation period.

15. The following summarises the significant changes made to the programme since the last full visit by RCVS/ EAEVE in 2007:

**Organisational and management changes**

- appointment of a new Head of School (2009)
- appointment of a European Diplomate in veterinary public health, a new 0.5 FTE teaching position, and senior clinical training scholarship in VPH started
- appointment of a new Professor of Veterinary Education (2012)
- appointment of a clinical Professor as Academic Head of Enterprise, Strategic Development & External Partnership
- more than 50% of academic staff establishment in the School appointed since 2009
- changes to the divisional structure of the School with central coordination of teaching and research (2009)
- rationalisation of committees managing the BVSc programme
- strategic alliance with Bristol Zoo Gardens, including 0.5fte shared teaching appointment and joint MSc in global wildlife health and conservation
- most parasitology teaching moved into the School (previously in the School of Biological Sciences)
- new staff review and development procedure and salary scales to improve clinical academic staff
progression prospects

• Senior Clinical Training Scholarship programmes re-established in pathology
• improvements to student support and tutor systems
• management of extra-mural studies reviewed and improved
• restructure of technical support for the School
• appointment of new School Manager (2013)
• management of Wyndhurst Farm taken over by external management company
• establishment of Farm Board with external chair (2010)
• establishment of Abattoir Board with external chair and appointment of external management consultants (2012)
• Anatomy Department restructured (2010) to become the Centre for Clinical and Comparative Anatomy, and made administrative part of the School of Veterinary Science
• review and restructure of management of technical and administrative staff, now managed by the School Manager
• new 0.4fte post for Head of Admissions (2012), university level review of management of admissions leading to centralised process; multiple mini-interviews added to admissions interview process.
• new ‘zero based’ budgeting system introduced for non-salary expenditure with Dean responsible for all budgets within his/her faculty
• increase in student numbers to 150 authorised by the University with effect from 2014
• closure of Animal Health & Veterinary Laboratories Agency (AHVLA) facility at Langford (September 2014); successful bid to DEFRA (June 2014) to provide farm animal post mortem surveillance service covering geographical area an hour’s drive from Langford, providing cases for teaching.

Buildings, facilities and major items of equipment

• establishment of Langford Veterinary Services (2009), a separate company owned by the University, leading to significant increase in clinical case load available for teaching
• major improvements to Wyndhurst Farm, including silage storage facility and slurry pit, and £2m major capital programme to build a new dairy unit, upgraded calf house and new young stock building
• new small animal surgery, imaging facility and intensive care unit (£7.5m investment) described by the RCVS Visitors in 2011 as ‘outstanding in terms of design and construction’
• new equine surgery (Alborada Building), £3m project completed in 2012
• equine imaging: CT scanner now accessible for horses, and a standing MRI installed in October 2014

• new clinical skills laboratory at Langford (2012) and satellite clinical skills laboratory in Bristol (2014)

• new student centre at Langford (£300,000 project), in the converted old Pathology Barn completed 2013

• upgrading of library facilities at Langford and Bristol

• improvements to small group teaching rooms in the Pearson Building, Langford

• upgrade of post mortem facilities

• Pre-Clinical Translational Research Centre under development (due to open in 2015), including a 3Tesla MRI and angiography suite available for veterinary clinical cases

Main changes to the study programme

• new BVSc curriculum rolled out from October 2013 for first year students

• extended final year of 44 weeks introduced for fifth year students (from May 2013)

• continuous updating of existing curriculum and teaching, including ‘de-bulking’ of lecture content, closer alignment to Day One Competences, introduction of case-based and problem-solving exercises

• changes to assessment methods, including introduction of Directly Observed Procedural Skills (DOPS)

• new regulations relating to teaching and student progression

• new Fitness to Practise process established, aligned to other professional programmes

• improvements in results on National Student Survey, with 99% overall student satisfaction in 2013

• participation of Bristol students in Cornell Leadership Programme and UK veterinary team leadership and professionalism course.
Summary of the Visitors’ findings

16. The report is presented to the RCVS, to ECOVE (through EAEVE), the AVBC and the SAVC which each have separate authority to determine accreditation or approval status within their own jurisdictions. The Visitors worked together as a single team to produce this report.

17. The Visitors received a warm welcome from staff and students and are grateful to all those who were responsible for preparing the self evaluation report and arranging the very full schedule.

18. The self evaluation report outlines the changes which have taken place since the 2007 visit. The University is commended on the support it has provided to the School of Veterinary Science since 2007 to allow a significant change and improvement in the resources, facilities and organisation of the Vet School activities. Recruitment of an enthusiastic and dynamic senior management team to the School has invigorated staff and students alike to create an ethos of positivity and ‘can-do’ attitude. The School, with support of the Faculty and the University, has responded positively to previous visitation reports and areas which were previously of concern have now shifted to examples of best practice.

19. The governance and organisation of the clinical service delivery through LVS provides a substantial quality caseload for undergraduate teaching and clinical research in a real commercial environment. Since the inception of LVS there has been a substantial improvement in clinical service provision with commercially successful businesses providing a high quality service. This is evidenced not only by increased throughput of cases but also by feedback from veterinary practitioners, students, clients and other stakeholders. LVS is now in a position to balance its portfolio of services to allow continued delivery of less commercially successful areas which are required for the undergraduate teaching, such as the provision of a large animal pathology service.

20. The governance and financial arrangements for Wyndhurst Farm have produced a turnaround from a loss making establishment with major biosecurity risks, as identified in the 2007 visitation report, to a financially sustainable example of best practice. The new dairy unit is of a very high standard and is an excellent and well-designed teaching facility as well as being a commercial farm giving a real insight for students. Biosecurity is strict and its importance constantly emphasised.

21. The School has undertaken a major curriculum review and is implementing a more modern and focused curriculum. The process has been rapid and intense and has benefited from excellent leadership of the School senior management team. There is obvious engagement and buy in by staff and students in the review process and appreciation of the more integrated and active learning approach being introduced. Staff are to be congratulated on the development and delivery of this new, vertically and horizontally-integrated curriculum. This is especially impressive given the fact that a number of different Schools within the Faculty have had to be involved in the development and delivery of the new curriculum in years 1 and 2. The School is to be commended on the use of a project manager in the development of the new curriculum, as the project manager represents a key element contributing to the successful development and delivery of this curriculum.

22. The Live Anatomy Barn, eBiolabs and the Clinical Skills Laboratory at Langford are to be commended for...
their innovation and ready accessibility for students. The Clinical Skills Laboratory is well-equipped, well laid out and fit for purpose. It is very much a “live” facility with new teaching aids being added all the time.

23. The School has a strong track record in encouraging undergraduate involvement in research activity with high numbers of students choosing intercalated degrees. A higher proportion of intercalating students are likely to go on to postgraduate clinical or research qualifications. Reintroduction of research projects in the new curriculum is highly welcomed by the visiting team.

24. In August 2015 the SVS will move to a new Faculty, The Faculty of Health Sciences, along with the Medical and Dental schools and the Centre for Comparative and Clinical Anatomy. This will provide further opportunity for collaborative research within the ‘One Health’ agenda and staff within SVS are positively engaged with this process of change. This organisational structure is seen as a good fit for developing the veterinary clinical programme, research and curriculum alongside those of their medical and dental colleagues.

25. The two major ongoing projects, the implementation of the new curriculum into years 3 and 4 and the increased undergraduate numbers, require finance to allow the projects to be successful. As this is time-critical the Visitors recommend that the Faculty approve and implement the business cases for these projects urgently. The timing of the visit has meant that it has not been possible to review the detailed curriculum for years 3 and 4 and so the Visitors recommend a short focused revisit during 2016/17 to review the implementation of the curriculum in these years.

26. The Visitors were grateful for the time afforded by the Vice-Chancellor Professor Sir Eric Thomas and the Deputy Vice-Chancellor, Professor Guy Orpen who met with the team at the conclusion of the visit to hear these summary findings. The Visitors also thanked Professor Price and her senior team for their excellent leadership of the School during a period of significant change and of course for their attention during the visit.

27. Finally, the Visitors were grateful for the time and effort of the students who met with the team during the visit. They are excellent ambassadors for the School.

Conclusion

28. The Visitors have identified areas where the degree course at the University of Bristol complies with the RCVS and EAEVE requirements. These are summarised below and presented to the various accrediting bodies (RCVS, ECOVE, AVBC and SAVC), whose role it is to determine evaluation and/or accreditation status in their own territories. In the Visitors’ view, the University of Bristol’s BVSc degree course complies with current requirements. The Visitors would suggest that a short, focused revisit should take place in 2016/17 to evaluate the implementation of the new curriculum, particularly in years three and four.

Commendations

29. The Visitors commend the University of Bristol on:
i. The support that the University has provided to the School of Veterinary Science since 2007 to allow a significant change and improvement in the resources, facilities and organisation of the Vet School activities. Recruitment of an enthusiastic and dynamic senior management team to the School has invigorated staff and students alike to create an ethos of positivity and ‘can-do’ attitude. The School, with support of the Faculty and the University, has responded positively to previous visitation reports and areas which were previously of concern have now shifted to examples of best practice.

ii. The governance and organisation of the clinical delivery through LVS, which provides a substantial quality caseload for undergraduate teaching and clinical research in a real commercial environment. Since the inception of LVS there has been a significant improvement in clinical service provision with commercially successful businesses providing a high quality service. This is evidenced not only by increased throughput of cases but also by feedback from veterinary practitioners, students, clients and other stakeholders. LVS is now in a position to balance its portfolio of services to allow continued delivery of less commercially successful areas which are required for the undergraduate teaching, such as the provision of a large animal pathology service.

iii. Early introduction of some features of the revised curriculum such as the extended final year and some case-based and more active learning for 3rd and 4th years.

iv. The enthusiastic and energetic participation of staff in the curriculum review process.

v. The use of eBiolabs prior to and after practical classes to introduce topics and formatively or summatively assess the students in Years 1 and 2.

vi. The Live Anatomy Barn and the Clinical Skills Laboratory at Langford, for their innovation and ready accessibility for students.

vii. The very enthusiastic library staff and their active involvement in library induction and training of the students in searching techniques and the use of eJournals, databases and the Web are of great value.

viii. The use of a project manager in the development of the new curriculum, as the project manager represents a key element contributing to the successful development and delivery of the new curriculum.
Recommendations

30. The Visitors recommend that the University addresses the following issues and reports annually on progress towards their implementation.

i. The University and Faculty should continue the support to the School to ensure sustainability and implementation of the new curriculum and the increased undergraduate numbers projects.

ii. The Faculty must approve and implement the business case for additional student numbers (HUG project) as provided by the School. This project has commenced in September 2014 with an increased intake to the veterinary programme of 150 students. It is therefore essential that the Faculty commits the funds to appoint the posts required by this project and secures available funds for the non-salary spend to allow sufficient resources to be available for each year of the programme as the additional students progress through the course.

iii. The Faculty must approve the additional funds required for implementation of the new curriculum. A cohesive business case was not produced for the Faculty prior to the start of the new curriculum and some resources have already been provided to cover the needs of years 1 and 2 of the new programme. However, the detail of years 3 and 4 of the new curriculum are currently being finalised and this will commence in the autumn of 2015. This means there is an urgent need for the funds to be released to enable required resources to be in place in a timely fashion.

iv. A business case was provided for reintroduction of research projects to years 3 and 4 of the new curriculum with associated costs and there is significant buy-in from staff across the Faculty for these research projects. As the research projects will commence for year 3 undergraduates in the 2015-16 academic year it is recommended that resources are approved and implemented urgently to avoid delay in timetabling of the programme.

v. Curriculum mapping software should be implemented as soon as is possible to allow interrogation of the curriculum to ensure topic coverage, outcome coverage and assistance in blueprinting examinations and assuring alignment of teaching and assessment.

vi. The School must provide some education on veterinary certification and report writing as part of its professional skills teaching.

vii. Adherence to biosecurity protocols in the small animal hospital and ambulatory vehicles must be enforced for staff and students.

viii. A barrier must be fitted to the ambulatory van to ensure that luggage cannot enter the passenger compartment in the event of sudden deceleration.
Suggestions

31. The following suggestions are drawn from the chapters of this report and the University will be invited to report on how they are being addressed at the next re-visit.

i. Within the new curriculum, aspects of the integrated learning programme could be made more explicit, for example in major areas such as Public Health and Epidemiology.

ii. Given the difficulty in accessing pig herds, the Clinical Skills Laboratory would benefit from a model to train students in blood sampling in pigs.

iii. Consideration should be given to having more pigs available at Cannington, for example a group of farrowing sows, as well as trying to provide access to a small poultry flock for both animal handling and clinical experience.

iv. As student numbers increase, consideration should be given to increasing the numbers of live animals or increasing the number of classes in the live animal barn, given the potential welfare implications for the limited number available of some species.

v. There is limited in-clinic exposure to exotic species that are only seen in the one week first opinion small animal practice rotation with some seen in the charity clinics. Given their increasing popularity, the School could consider ways to increase exposure to a traditional primary care exotic species caseload.

vi. Additional staff from external teaching providers could usefully be encouraged to undertake training in teaching and assessment, which could be run on site by the School.

vii. There is currently very little evidence of exposure to pigs and commercial poultry/egg production. This is an area where additional teaching, in particular herd/flock visits, might be considered.

viii. The School should consider including supplementary extramural visits to high throughput abattoir facilities in order to enable students to observe real processing speed and the need for rapid decision making by the OV.

ix. Monitor adherence to newly-established timelines for ensuring prompt and timely release of examination papers to external examiners.

x. The School is encouraged to strengthen processes for student evaluation of teaching and make discussion of the results a part of the annual performance review for staff. However, it was noted that, in other contexts, the collection and action on student feedback is currently extensive and care will be needed not to induce ‘feedback fatigue’ within the student body by asking for too much feedback too frequently.

xi. Consideration could be given to making tutor training compulsory to improve consistency within the student support process.

xii. Ensure that all contracts for external teaching provision are signed and up to date.
xiii. An analysis of the variability in scoring among interviewers involved in the admissions process is suggested to allow for standardisation.

xiv. The development and delivery of the new integrated curriculum currently depends on the enthusiasm and dedication of the academic staff involved. Maintenance of the delivery of the course in future may require additional administrative support and this should be kept under review.

xv. Overloading the Senior Clinical Training Scholars with teaching of undergraduates should be avoided and sufficient opportunities for full preparation for the specialist level should be provided.

xvi. Much of the postgraduate support is based in Bristol and consideration should be given to ways of enabling Langford-based residents and other postgraduate students to engage in the wider postgraduate training opportunities available in Bristol.

xvii. Provision of a designated space for postgraduates to meet would be helpful to facilitate integration and networking.

xviii. The School could make better use of the SEL, in particular for linking to EMS Feedback Forms, recording of students’ reflective reports to make management of the process easier and making better use of the data that can be downloaded from the system for further analysis.
Stage 1

Findings and comments from the Visitors in relation to RCVS and EAEVE essential requirements

Chapter 1 – Objectives

(NB. Text appearing in the shaded boxes is taken from the EAEVE/RCVS Stage 1 requirements)

The objectives of veterinary training institutions are to provide adequate, ethical, research-based veterinary training that enables the new graduate to perform as a veterinary surgeon capable of entering all commonly recognised branches of the veterinary profession immediately on graduation or of being capable of performing adequately after a generally accepted period of practical experience. The training must cover the broad requirements for veterinary graduates and comply with EU Directive 2005/36/EC. Veterinary education should be based on scientific grounds and proven experience and provide students with adequate learning opportunities thus laying the basis for life-long learning. Considering that more than 50% of active veterinarians in Europe are engaged in clinical practice, a clinical focus is expected to be maintained during the basic training in veterinary medicine.

In addition the institutions should conduct research, provide postgraduate and specialist training and play a role in continuing veterinary education (see also Stage two).

They should, furthermore, provide services to members of the veterinary profession and the community as a whole.

Findings

1.1. The University of Bristol Veterinary School has set itself a vision statement to be “globally recognised for the delivery of world-class education programmes and for its ability to translate fundamental research into improved health and welfare of animals and humans and to increase sustainability of livestock production within welfare friendly limits. Bristol University is an organisation characterised by a friendly atmosphere of academic curiosity, productivity and adherence to high standards of professional and scientific behaviour operating within modern facilities.”

1.2. These objectives are aligned with the University of Bristol as a whole and are based on the following values:

- rigour in research scholarship pursued by all academic staff
- teaching informed by educational, clinical and scientific research within the School as well as from outside
• clinical decision making based on disciplined study of outcomes in the caseload

• commitment to developing the careers of, and rewarding, creative individuals functioning within thematic teams

• commitment to providing students with an outstanding educational experience

• an environment in which the importance of each individual member of staff and student is understood and valued.

1.3. The School has set itself a number of specific short term and medium term objectives which it aims to have met between 2012 and 2020.

1.4. Short term objectives to be completed between 2012 and 2020 are:

• to retain full RCVS accreditation and EAEVE approval

• to put in place a new BVSc curriculum

• to increase BVSc student numbers

• to submit an application for an Athena SWAN Bronze Award in November 2014

• prepare for the 2014 REF exercise (now completed)

• move to a new Faculty of Health Sciences in August 2015

• address training provision for Clinical Training Scholars

• recruitment of leaders for a number of research groups

• continue to develop a Research Strategy

• work with the Faculty to develop a more effective working relationship with LVS

• improve student experience

• develop a ‘road map’ for training veterinary clinician scientists.

1.5. Medium term objectives to be completed between 2014 and 2020 are:

• put in place a world-class BVSc curriculum

• apply for AVMA accreditation

• work with the University and the new Faculty to put in place a ‘REF Action Plan’ for 2020

• work with Campaigns and Alumni Relations Office and the Langford Trust to fundraise for clinical and translational research

• further develop a management structure
• continue to evaluate staff review practices
• ensure that other educational programmes in SVS are sustainable
• continue to work to foster greater integration
• achieve Athena SWAN Silver Status.

1.6. There is no system in the current Faculty that monitors a School’s objectives or ensures alignment to the Faculty’s strategic aims. However, the Faculty Board and the Faculty Senior Management Team meet monthly and ensure there is communication between Schools in the Faculty. Additionally, all Heads of School have the opportunity to feed into the documentation associated with the Annual Academic Review (AAR) process each autumn which precedes the annual budget setting round in the spring: it enables the Dean to ensure that the University Senior Management Team is made aware of each School’s priorities and challenges. Locally, the School Management Team of SVS monitors the list of objectives that are linked to the School’s long-term vision.

1.7. Staff are made aware of the objectives at staff meetings and via the School Review Process (all documents and reports were available for staff and students to read and all constituencies were actively involved in the review process). Staff also play a role in defining how the School Management Team identify priorities at events such as ‘Away Days’; e.g. in January 2014 an Away Day was held for all academic staff to start defining strategic priorities for the next few years. The School Manager organises similar events for administrative and technical staff where the School’s vision and aims are discussed. Students have been involved in the curriculum review process and had significant input into the planning of the refurbished student facilities at Langford.

Comments

1.8. The School is progressing well with the defined objectives set for both short and medium term. A substantial curriculum review has taken place with a new curriculum introduced for first and final years in 2013. Beneficial changes to teaching and assessment have also been implemented throughout the five years of the programme. The success of clinical delivery through LVS has now embedded into the Faculty and School and the SVS-LVS partnership board and School Management Committee (SMC) of SVS ensure that strategic decisions are made jointly to the benefit of all stakeholders. The School has submitted a Unit of Assessment 6 return to the 2014 REF exercise and is committed to developing its research strategy. The move to a new Faculty of Health Sciences is seen as an opportunity to engage with other schools to align research strategy to the ‘One Health’ agenda.

Commendations

1.9. The University is commended on the support it has provided to the School of Veterinary Science since 2007 to allow a significant change and improvement in the resources, facilities and organisation of the Vet School activities. Recruitment of an enthusiastic and dynamic senior management team to the School has invigorated staff and students alike to create an ethos of positivity and ‘can-do’ attitude. The School, with
support of the Faculty and the University, has responded positively to previous visitation reports and areas which were previously of concern have now shifted to examples of best practice.

Recommendations

1.10. It is recommended that the University and Faculty continue to support the School to ensure sustainability and implementation of the new curriculum and of the increased undergraduate numbers projects.
Chapter 2 – Organisation

Veterinary training must take place within institutions of higher education (university, a higher institute providing training recognised as being of an equivalent level, or under the supervision of an university, Directive 2005/36/EC), formally recognised as such in the respective country, and should be undertaken preferably by a free-standing unit, specifically established for that purpose. If it is undertaken by one or more departments of a parent institution, some of which also have other teaching commitments, the veterinary curriculum must be properly integrated, with effective central veterinary control. The number of veterinarians provided as educators (usually a minimum of 80 individuals working full time in the Faculty) must be high enough to ensure co-ordinated delivery of the teaching programme. Such a programme must be afforded the same recognition, status and autonomy as other professional training programmes in the institution and/or the state.

The organisational structure should make possible an objective evaluation of the quality of the training provided and the skills of the graduates. The training of the graduates should be monitored for quality at the subject and institutional levels, laying the basis for a confident system of quality assurance.

In order to ensure that the veterinary training meets the objectives and requirements of EU Directive 2005/36/EU, the organisational structure should allow input not only from educators and students but also from stakeholders (e.g. members of the profession and from the public).

Findings

2.1. The School of Veterinary Sciences is currently part of the Faculty of Medical and Veterinary Sciences, which in turn is part of the University of Bristol. On August 1st 2015 the School of Veterinary Sciences and the Centre for Clinical and Comparative Anatomy will become part of the newly formed Faculty of Health Sciences, together with the medical and dental schools currently in the Faculty of Medicine and Dentistry. A Pro-Vice Chancellor (PVC) is responsible for oversight of each Faculty.

2.2. At University Level the following administrative bodies develop policy and ensure effective governance:

- **Council** – the governing body of the University. In consultation with Senate it sets the policy of the University on academic matters and ensures that the Vice-Chancellor and University officers further that policy. It reviews and promotes the teaching and research of the University and supervises Senate. Council makes and amends ordinances and regulations and nominates the Chancellor, Pro-Chancellors and Treasurer for appointment by Court. It also appoints the Vice-Chancellor and Pro-Vice-Chancellors after consultation with Senate. Council will investigate and, if appropriate, redress any grievance brought by officers, staff or students of the University.

- **Court** – an advisory body that considers the annual accounts and the strategy and management of the University.

- **Senate** – the University’s principal academic body, responsible to Council for teaching and learning, examinations and research and enterprise. It has more than 100 members, including Deans, Heads of Schools, elected academics and student representatives. Senate normally meets five times a year and
is chaired by the Vice-Chancellor.

- **Vice-Chancellor’s Advisory Group** includes members of the University senior management team and includes: the Vice-Chancellor, the Deputy Vice-Chancellor, the Registrar, the Finance Director, the Pro Vice-Chancellor for Research, Pro Vice-Chancellor for Education and Pro Vice-Chancellor for International Development.

- **University Planning and Resources Committee (UPARC)** – UPARC is a stand-alone Committee which advises the Vice-Chancellor, Council and Senate on operational and academic policy matters. UPARC may report directly to University Council, on matters that lie outside the remit of Senate, and/or on issues where Council would benefit from advice direct from UPARC.

- **Capital Investment Programme Board (CIPB)** is the University committee that owns, oversees the development of, and monitors the University of Bristol’s capital programme. It is chaired by the Deputy Vice-Chancellor and comprises members of the senior team.

- **Systems and Process Investment Board (SPIB)** is the University committee responsible for the governance and oversight of the University’s portfolio of programmes, IT Services and associated policies (encompassing systems, process review and improvement, and strategic change). It is chaired by the Registrar and comprises the Deputy Vice-Chancellor, the Pro Vice-Chancellors (Research and Education), the Finance Director and relevant divisional heads.

- **University Education Committee** develops policy and advises Senate and Council on all aspects of teaching and learning activities within the University. The committee also provides education leadership in relation to learning, teaching and assessment and advice on student recruitment policy. It is chaired by the Pro Vice-Chancellor for Education and comprises the Academic Registrar, the Vice-Chancellor and the Directors of both undergraduate and graduate studies teams.

**Faculty Committees**

- **Faculty Board** is responsible for management of the Faculty, debating and advising the Dean on the education and research strategies of the Faculty, and with responsibility for the management of these. The Faculty Board is responsible for monitoring the Faculty budget and associated staffing requirements. The Board is chaired by the Dean and includes the Heads of Schools, Faculty Officers (UG and PG Education Directors, Research Director, Faculty International Director), Faculty Manager, Faculty Education Manager, Faculty HR Manager and Faculty Finance Controller.

- **Faculty Graduate Studies Committee** considers all matters relating to postgraduate studies in the Faculty. The joint Board of Examiners/Progress Committee receives and approves all postgraduate unit marks under reserved business of the Graduate Studies Committee, and decides on progress issues.

- **Faculty Research Committee** is a forum for discussion of topics and issues relevant to all research activity in the Faculty including the implementation of novel technologies, oversight and provision of research facilities, creation and implementation of best practice methods and discussion of current research priorities. The Faculty Research Committee reports to the Faculty Board and Senior Management Team through the Faculty Research Director and to Schools through the School Research Leads.
• **Faculty Undergraduate Studies Committee** considers all matters relating to Undergraduate Studies in the Faculty, including consideration of changes to programmes and units, review and consideration of recommendations from FQET and any items referred from the Faculty Board.

**School (SVS) Committees**

• **School Management Committee (SMC)** is the main decision making body in the School and meets monthly. SMC defines the strategy and objectives for SVS and ensures that the School meets its objectives. SMC does not report to any other ‘higher’ committee of the Faculty or University, but plays a role in articulating for the Dean and the University the needs of the wider Bristol Veterinary School that is, in effect, a ‘virtual’ entity. Because many aspects of veterinary teaching are not the direct responsibility of SVS, SMC therefore has a key influencing role. A key function of SMC is to ensure that there is clarity around what the School needs from Professional Services (via the School Manager and Faculty Manager). Although the Dean has responsibility for agreeing the SVS budget (and that of other Schools which teach on the BVSc), SMC articulates on an annual basis the financial requirements of the School. SMC has responsibility for monitoring the delivery of the annual budget and is able to make decisions on the School’s annual capital and minor works allocations. SMC also has responsibility for managing a range of activities and facilities which support teaching and research including Wyndhurst Farm, the Abattoir and the new Farm Animal Pathology and Disease Surveillance service, although separate Boards manage the strategy and day to day operations of these enterprises.

• **Teaching Management Committee (TMC)** is responsible for overseeing all aspects of the organisation, delivery and assessment of undergraduate and taught postgraduate Masters teaching within SVS. It has oversight of all teaching or examination related resources and is responsible for developing policy to ensure they are used appropriately. It reports to SMC.

• **SVS/LVS Partnership Board** - responsible for overseeing the efficient and co-ordinated delivery of SVS objectives that involve Langford Veterinary Service (LVS); specifically to ensure that clinical teaching and clinical research objectives are met. It meets monthly either as a full board, or core member, format. It reports to SMC.

• **Research Committee** is responsible for promoting a research ethos within SVS and acts as the main strategy and planning committee for all research based activities. This extends into the operation and management of the School’s Grant Review Process. It represents the views of the School’s research groups at SMC, meets quarterly and reports to SMC.

• **School Health and Safety Committee** - reports to SMC and is responsible for having effective systems in place to ensure staff receive the correct information regarding Health and Safety, producing risk assessments for site activities and communicating best practice methods to staff. The committee also ensures that accidents, dangerous incidents and occupational health issues are investigated and reported to the Director of Health and Safety.

• **Veterinary Programme Committee (VPC)** - currently chaired by Professor Sarah Baillie and is responsible for overseeing the quality of teaching and learning on the whole five years of the BVSc programme. VPC reports to the FMVS Undergraduate Studies Committee (UGSC) which has a link to Faculty Board via reports of the Faculty Education Director (FED). The FMVS UGSC reports to the
University Education Committee. The FED chairs the FMVS Examination Board. Annually a Programme Review is undertaken and this process is overseen by the University’s Academic Quality and Partnerships Office.

VPC also liaises directly with the SVS Staff/Student Liaison Committee, which deals with issues raised by students in relation to teaching facilities and other student matters and there is liaison with the Academic Support Committee and Admissions Committee. Student representatives (elected year course representatives and Centaur President) sit on VPC.

While VPC has responsibility for oversight of the BVSc programme, it has no mechanism for implementing change, as resources are managed at School and Faculty level. However, the chair of VPC now sits on the SMC of SVS and also meets regularly with Heads of Teaching in other Schools and liaises with the Chair of the Teaching Management Committee and the LVS-SVS Partnership Board. The Year 5 lead, Ms Sheena Warman, sits on VPC and the LVS-SVS Partnership Board.

2.3. The School engages extensively with the veterinary profession. Veterinary surgeons from private practice are involved in undergraduate admissions; they play a key role in the delivery of several elements of Professional Studies including communication skills and career mentoring. Private practitioners have been involved in the design of the new BVSc curriculum, and occasionally sit on appointments boards for academic staff. Final year students undertake some rotations in external veterinary practices, and Bristol has close relationships with a number of veterinary practices that provide base/foster practice EMS placements. Veterinary practices are involved in supporting the new Farm Animal Pathology and Disease Surveillance service. Langford Veterinary Services employs a large number of veterinary surgeons who engage with students on a day to day basis. A number of external veterinary surgeons are involved in undergraduate teaching on-site through the provision of clinical services (e.g. dentistry, ophthalmology). The chair of the abattoir Board is an external veterinary surgeon.

2.4. The governing body of the veterinary profession, the Royal College of Veterinary Surgeons, exerts influence on veterinary education policy both directly and indirectly. The Head of School, the Chief Executive Officer of Langford Veterinary Services, and Head of the Nursing programme at Bristol sit on RCVS Council and are members of a number of RCVS Committees.

2.5. Members of the profession are also sought out by the School to act as External Examiners for the professional examinations that take place within the School and, by way of feedback, influence both undergraduate education policy and assessment.

2.6. Members of the general public are not directly involved in the management of the School, however, lay people play a key role on the Farm and Abattoir Boards. The University’s Council and Court include lay members, which provides an additional viewpoint for policy decisions.

2.7. An aspiration for the future as stated by the School in its Self Evaluation Report is that the role of the Head of Bristol Veterinary School (BVS) should again be separated from the Head of the School of Veterinary Sciences and that Bristol Veterinary School should be a recognised entity within the University to ensure clarity as to who owns the whole veterinary programme. Also in the SER the School suggests that a Veterinary Board (ideally with external members) needs to be re-instated, chaired by the Head of BVS, to provide a forum that has oversight of all issues relating to the wider veterinary School. With this model one person (the Head of BVS) would be delegated (by the Dean) with responsibility for all veterinary matters at
Bristol and the Faculty and University would take their advice from this individual.

Diagram of the administrative structures showing the School in relation to the university and ministerial structure of which it is part. Diagram of the internal administrative structure of the School itself (councils, committees,
School of Veterinary Sciences - Academic Management of BVsc Programme

Comments

2.8. In August 2015 the SVS will move to a new Faculty, The Faculty of Health Sciences, along with the Medical and Dental schools and CCCA. This will provide further opportunity for collaborative research within the ‘One Health’ agenda and staff within SVS are positively engaged with this process of change. This organisational structure is seen as a good fit for developing the veterinary clinical programme, research and curriculum alongside those of their medical and dental counterparts.

Commendations

2.9. The governance and organisation of the clinical delivery through LVS provides a substantial quality caseload for undergraduate teaching and clinical research in a real commercial environment. Since the inception of LVS there has been a significant improvement in clinical service provision with commercially successful businesses providing a high quality service. This is evidenced not only by increased throughput of cases but also by feedback from veterinary practitioners, students, clients and other stakeholders. LVS is now in a position to balance its portfolio of services to allow continued delivery of less commercially successful areas which are required for the undergraduate teaching, such as the provision of a large animal pathology service.
Chapter 3 – Finances

Finances must be adequate to sustain the educational programmes, to allow for adequate research and to meet societal objectives of the Faculty. Universities and national ministries must recognise that veterinary education is more expensive than training in other science-based disciplines, since it includes clinical instruction based on public services (e.g. patient care). It must also be considered that veterinary education has to take place in a research environment and that salaries should be sufficiently high so as to attract and retain highly qualified staff.

The budget must allow the Faculty to:

- Perform adequate research based teaching
- Attract and retain highly qualified academic and support staff to reach, or exceed satisfactory teaching staff/student and teaching staff/support staff ratios.
- Ensure provision and renewal of up to date teaching (including IT) facilities, laboratory and clinical equipment (including vehicles for the ambulatory clinics).
- Ensure teaching and clinical training in premises with adequate hygienic and safety standards,
- Ensure adequate intramural clinical training by securing an adequate caseload, including emergencies, across animal species and adequate provision of stationary and ambulatory (mobile) clinical services, according to the most recent advances in veterinary medicine.

Bearing in mind the increasing demand for specialist training, funds should be made available for places for both clinical and research postgraduate students in areas in which the Faculty has expertise.

Findings

3.1. The University of Bristol is a research-intensive university with an annual income in 2012-2013 of £459.2M. Of this, £118.3M was derived from funding body grants (HEFCE), £131.7M from tuition fees and support grants, £120.1M was research-derived and a further £89.1M was classified as ‘other’ income.

3.2. The Langford site has received over £13M investment in new buildings since the 2007 visitation.

3.3. The Schools and Centres within the University are currently divided into six academic faculties (headed by the Deans as budget holders). These six faculties, together with Professional Services (headed by the Registrar and Chief Operating Officer as budget holder), Finance Services, and Central and Corporate costs, make up the Budget Centres. The faculty structures have just been reviewed and the School of Veterinary Science will be joining with the medical and dental schools to form a new Faculty of Health Sciences. There will continue to be six Faculty Budget Centres and each will continue to be divided into several Budget Units, which are, with a few exceptions, the Schools. Each of the contributing areas is responsible for providing teaching input into several courses in addition to the BVSc. For example, CCCA, Biochemistry, Physiology and Pharmacology also teach on Bristol’s medical and dental programmes, as
well as a range of BSc programmes.

3.4. The allocation of Veterinary Teaching Income between the different Schools for 2013-2014 is detailed in tables 3.2 and 3.3. With the exception of SVS, it is not possible for the Faculty to provide accurate information on other Schools’ expenditure on delivery of the BVSc teaching because staff and teaching facility costs are shared between several different taught programmes.

3.5. **Langford Veterinary Services (LVS):** In 2009 LVS was set up as a wholly owned subsidiary of the University. Income and direct costs relating to clinical services flow through this subsidiary. As a separate organisation LVS prepares and manages its own budgets that are annually reviewed and agreed by the LVS Board. Any surplus that LVS generates is retained by the central University to help contribute to payment for the new clinical facilities at Langford. However, in 2013-2014, LVS incorporated £20K of its budget to support clinical research.

3.6. In 2013 the Finance Director agreed to a joint annual budget meeting, as part of the normal University budgeting cycle, which is to include both SVS and LVS. The aspiration is to ensure that there is optimal strategic alignment between LVS and SVS so that the academic objectives of SVS and financial targets of both organisations can be met. This system provides greater transparency over the veterinary clinical staffing establishment and the need for new clinical posts and Senior Clinical Training Scholars is discussed at these meetings.

3.7. In general, the Faculty takes the view that each of the five years of the programme is a clinical year and income to each School is therefore calculated based on the percentage of the programme taught.

3.8. The way the Faculty currently supports the School is to provide a non-salary budget via a needs-based budgeting approach. From 2014/2015 this is being applied to all Schools in the Faculty. Currently SVS is provided with 40% of the Faculty’s nonsalary budget. Allocation of staffing FTEs is based on the consideration of the needs of the whole Faculty.

3.9. The total number of home undergraduate students that the University can admit each year is determined by the Higher Education Funding Council for England (HEFCE). Because HEFCE has lifted the cap on the number of students that can be admitted with AAB grades the University has agreed to increase veterinary student numbers from 120 to 150 in October 2014. This decision was made to improve the financial position of the School/Faculty and to meet the targets set in the business plans used to support the recent investment in teaching and clinical facilities at Langford.

3.10. HEFCE-funded students attract a standard Unit of Resource (UoR) based on the banding of their course. BVSc students are funded at Band A – the highest rate which, for 2013/14, is £10,000. Student tuition fees increased from £3,000 to £9,000 in 2012/13. Student intakes prior to 2012/13 are still on the old regime, attracting a UoR of £13,210 as Band A students. These students are paying the lower tuition fee of around £3,000 per year.

3.11. All incoming Bristol undergraduates now pay fees of £9,000 per annum. In 2013 Bristol changed the fee structure for graduate entrants to the BVSc so that it is now the same as for non-graduate entrants. The overseas student fee for 2014-2015 is £17.5k (approx. £31k per annum for years 4 and 5 of BVSc).

3.12. Of the £9K home student tuition fee, the University retains £1,000 to be used to fund its student bursary scheme and widening participation programme. This is not reflected in the income distribution but allocated through the resource allocation model (attributed costs). The rest is distributed to the Faculty and
then down to schools as teaching income.

3.13. Table 3.a below shows the current (2013-2014) income allocation for the BVSc to the different Schools. This is based on teaching of the old BVSc curriculum and does not reflect the change in the proportion of teaching delivered by different Schools since the new BVSc was introduced in 2013. The percentage of the total BVSc Programme taught by two schools (CCCA and SVS) has increased over both academic years 2013/2014 and 2014/2015 and there is a further increase of 8.2% planned in 2015/2016. In 2015/2016 the FIS for SVS should increase to reflect this change in academic effort.

3.14 The School states in its SER that it will be difficult to meet its short and medium term objectives without a fundamental review of the funding model, as the University’s financial position for the next three years will be very challenging. The School of Veterinary Sciences will need to make a turnover saving of £165K in 2014-15 that is normally achieved by academic staff movement. Furthermore, in order to meet Faculty targets in 2014/15, additional income generation, or a further saving, has been set at £140K for SVS. This will be achieved by a combination of recruitment freezes and possibly redundancy.

Table 3.a: Veterinary HEFCE income distribution to contributing Schools based on current teaching load (£000s)

<table>
<thead>
<tr>
<th>Year</th>
<th>FMVS</th>
<th>FSCI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ANAT</td>
<td>BIOC</td>
</tr>
<tr>
<td>2013-14</td>
<td>1,245</td>
<td>422</td>
</tr>
</tbody>
</table>

N.B. This is based on the teaching percentages in Table S1 shown as Supplementary Financial Information

Table 3.b: SVS Income since 2010 (£000s)

<table>
<thead>
<tr>
<th>Year</th>
<th>State (government)</th>
<th>Income generated by the School</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HEFCE Teaching Income</td>
<td>HEFCE Research Income includes QR.</td>
<td>Fees (inc UG, overseas and PGT)</td>
</tr>
<tr>
<td>13/14**</td>
<td>4,990</td>
<td>1,191</td>
<td>2,645</td>
</tr>
<tr>
<td>12/13*</td>
<td>4,964</td>
<td>1,223</td>
<td>2,294</td>
</tr>
<tr>
<td>11/12</td>
<td>4,689</td>
<td>1,247</td>
<td>1,954</td>
</tr>
<tr>
<td>10/11</td>
<td>5,066</td>
<td>1,412</td>
<td>1,854</td>
</tr>
</tbody>
</table>
Table 3.c: Table: SVS Income Analysis – specifically BVSc

<table>
<thead>
<tr>
<th>Year/£000s</th>
<th>HEFCE Teaching Income***</th>
<th>Fees</th>
<th>% of total SVS income</th>
<th>HEFCE income to other areas (BVSc)</th>
<th>Fee income to other areas (BVSc)</th>
<th>Total BVSc income to UoB</th>
</tr>
</thead>
<tbody>
<tr>
<td>13/14**</td>
<td>4,448</td>
<td>1,798</td>
<td>47.0%</td>
<td>1,826</td>
<td>1,608</td>
<td>9,680</td>
</tr>
<tr>
<td>12/13*</td>
<td>4,477</td>
<td>1,529</td>
<td>45.6%</td>
<td>2,400</td>
<td>1,180</td>
<td>9,586</td>
</tr>
<tr>
<td>11/12</td>
<td>4,193</td>
<td>1,546</td>
<td>43.2%</td>
<td>2,467</td>
<td>881</td>
<td>9,087</td>
</tr>
<tr>
<td>10/11</td>
<td>4,411</td>
<td>1,464</td>
<td>43.1%</td>
<td>2,400</td>
<td>716</td>
<td>8,991</td>
</tr>
</tbody>
</table>

* full year prior to visitation  ** forecast ***provided by SSIO

Table 3.d: SVS expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>Pay</th>
<th>Non Pay</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Salaries</td>
<td>Teaching support</td>
<td>Research</td>
</tr>
<tr>
<td>2013-14</td>
<td>5,263</td>
<td>415.5</td>
<td>61.2</td>
</tr>
<tr>
<td>2012-13*</td>
<td>4,513</td>
<td>350.0</td>
<td>57.0</td>
</tr>
<tr>
<td>2011-12</td>
<td>4,103</td>
<td>336.6</td>
<td>39.5</td>
</tr>
</tbody>
</table>

*year prior to visitation, ** Does not include LVS clinical expenditure on support. LVS expenditure can be reviewed in the LVS management accounts.

1) Included general administrative (non-salary) costs such as postage.

NB: in all the years above, the non-salary budget has been exceeded, but the School has been able to manage its budgets by making significant salary savings (e.g. from the technical restructuring and because of inevitable delays in filling academic posts). No penalty has been applied to SVS for exceeding its non-salary budget and much analysis has been done to ensure going forward the non-salary budget reflects better the level of activity and support required by SVS.

It is unfortunately not possible for the Faculty to provide information on expenditure from other Schools teaching on the BVSc. This is because they teach on several professional and BSc programmes and staff and consumables costs are shared across programmes.
Comments

3.15. The budget holder for the SVS and other Departments teaching on the veterinary programme is the Dean. The Head of the School is engaged in the budget setting process jointly with the Dean and is responsible for setting the financial needs of the School. There appears to be sufficient resource to the School for the current needs although as identified in the recommendations below additional resource is required for the two major projects which are underway, namely the increased undergraduate numbers and the introduction of the new curriculum. The commercial businesses run through LVS have separate financial modelling and provide additional resource opportunity for School activity in addition to funding capital plans for the businesses.

3.16. The governance and financial arrangements for Wyndhurst Farm have produced a turnaround from a loss making establishment with major biosecurity risks as identified in the 2007 visitation report to a financially sustainable example of best practice.

Recommendations

3.17. The Faculty must approve and implement the business case for additional student numbers (HUG project) as provided by the School. This project has commenced in September 2014 with an intake to the veterinary programme of 150 students. It is therefore essential that the Faculty commits the funds to appoint the posts required by this project and secures available funds for the non-salary spend to allow sufficient resources to be available for each year of the programme as the additional students progress through the course.

3.18. The Faculty must approve the additional funds required for implementation of the new curriculum. A cohesive business case was not produced for the Faculty prior to the start of the new curriculum and some resources have already been provided to cover the needs of years 1 and 2 of the new programme. However, the detail of years 3 and 4 of the new curriculum are currently being finalised and this will commence in the autumn of 2015. This means there is an urgent need for the funds to be released to enable required resources to be in place in a timely fashion. A business case was provided for reintroduction of research projects to years 3 and 4 of the new curriculum with associated costs and there is significant buy-in from staff across the Faculty for these research projects. As the research projects will commence for year 3 undergraduates in the 2015-16 academic year it is recommended that resources are approved and implemented urgently to avoid delay in timetabling of the programme.
Chapter 4 – Curriculum

Veterinary training must comprise at least five years’ full-time theoretical and practical study in a University or equivalent higher education establishment. Longer veterinary basic training is a legal decision for the country.

It is imperative to acquire basic knowledge in all fields of veterinary science, particularly in clinical instruction, thus enabling veterinary surgeons to perform all their duties, as stated in Directive 2005/36/EC, Annex V. It is desirable that the students are allowed more advanced training (tracking) in one given field. This can be up to 20% if students meet the day1-competences.

Provided that the curriculum maintains an adequate level of training, faculties can follow the Bologna Declaration by offering a Bachelor’s degree prior to finishing the 5-year full-time minimum undergraduate veterinary education, leading to the award of the professional title of Veterinary Surgeon (or equivalent professional title) as regulated by the Directive 2005/36/EC. Graduation after completing this veterinary education is equivalent to a Master’s level and, depending on national regulations, this degree may be assigned to the Veterinary Surgeon (or equivalent professional denomination). The title of Veterinary Surgeon is the only professional title provided (Directive 2005/36/EC) after having completed these full-time studies lasting for at least 5 years.

Acquisition of generic competences such as skills in written and oral communication, problem-solving and professional attitudes at all stages of the curriculum are an important adjunct to practical and clinical skills.

The curriculum (e.g. the distribution of the theoretical and practical training among the various groups of subjects listed in Directive 2005/36/EC) must be acquired in such a manner that the educational aims are met.

Curriculum development is the responsibility of the institution as a whole, and should not be left to individual departments (see also Stage two).

The aims of the curriculum and the learning objectives/outcomes must be clearly explained to both staff and students (see also Stage two).

These aims must reflect the needs of the profession and of society, and mechanisms must be introduced to ensure this (see also Stage two).

Methods must be established to monitor and, where necessary, amend the curriculum. Faculties should aim towards the quality assurance mechanisms prescribed for Stage two.

The instruction provided must include basic clinical training across all common domestic species, e.g., companion animals (dog, cat), equine and the food-producing animals of the bovine, ovine, caprine, porcine, avian and farmed fish species. In cases where the Faculty cannot give adequate hands-on teaching in a species, arrangements should be made for students to learn this at another Faculty (freedom of learning – European Credit Transfer System principle).

The breakdown of the theoretical and practical courses between the various groups of subjects must be balanced and co-ordinated so that the students may acquire the knowledge, skills and experience mentioned in these guidelines. Practical training (particularly clinical training) requires the active participation of students under appropriate staff supervision in adequate ratios.
Extra-mural practical training may form part of a full-time veterinary course as long as it is supervised by the institution concerned and does not exceed six months of the total academic five-year training period (Directive 2005/36/EC). Extra-mural training is complementary, and can not be used to replace training by the Faculty, but can be used to supplement the basic intramural training provided by the institution.

All students must have acquired “day-one” competences by the time they graduate including general academic and professional attributes and attitudes towards professional development as well as pertinent practical -generic and clinical- skills.

Provisions should be made for those undergraduate students who want to gain specific experience in research.

Findings

4.1. Tables 4.a and 4.b below show the structure of the new BVSc curriculum in years 1 and 2 and the curriculum followed by current final year students (from October 2010 to June 2015).

**Table 4.a: Structure of the new Bristol BVSc curriculum**
The BVSc has undergone a major review and a new curriculum is being designed and implemented. The new Years 1 and 5 started in 2013-14, Year 2 in 2014-15 and Years 3 and 4 will follow in 2015-16 and 2016-17 respectively. In parallel with the introduction of the new curriculum, existing years (‘old’ curriculum) have also undergone change to incorporate some elements intended for the new curriculum.

4.2. The BVSc curriculum is being designed to meet the RCVS Day One Competences, EAEVE requirements and the QAA Subject Benchmark for Veterinary Science. The curriculum is delivered over 5 years and is outcomes-based. It aims to provide students with the knowledge and understanding of basic and clinical science and the practical competences and the professional attributes of a veterinary surgeon.

4.3. Following the recommendations put forward by the previous RCVS visitation in 2011, and a subsequent School Review, the School has undertaken to redesign the curriculum to ensure the programme remains relevant and engaging for students.

4.4. The new curriculum aims to achieve:

- Horizontal integration: basic science disciplines are aligned under systems-based elements and clinical disciplines are aligned by system and species where possible.

- Vertical integration with the clinical relevance of basic sciences emphasised from Year 1 e.g. using Live Anatomy and case-based learning to motivate and contextualise learning. Professional Studies units have been introduced in all five years and other vertical themes have been developed that run throughout the curriculum e.g. Veterinary Public Health (VPH), Evidence Based Veterinary Medicine (EBVM), practical and clinical skills.

- Reduced content by removing unnecessary repetition and focusing on relevance to Day One Competences.
• A move from teacher-focused to learner-centred approaches, allowing more space for independent study while also promoting methods that encourage active learning; e.g. all students have their own ‘clickers’ (audience response systems) to support more interactivity in lectures.

• The development of lifelong and independent learning skills and professionalism; e.g. each year, as part of the Professional Studies unit, students produce a reflective journal.

• Enhancement of employability: each year includes plenary sessions which provide insight into the spectrum of veterinary careers. Students have options to focus on an area of their choice in Year 5 during track and elective rotations and can participate in mock interviews.

• Modernisation of assessment practices which are monitored via the BVSc Assessment Matrix which details all assessments across the programme.

These changes have been supported by a comprehensive programme of staff training.

4.5. Aspects of the above changes have also been implemented in the existing curriculum where possible e.g. improved integration in Year 4 by aligning material according to systems, reduced curriculum overload by ensuring Day One relevance, increased use of case-based learning, modernisation of assessment including the introduction of Objective Structured Clinical Examinations (OSCEs) in Year 3. Professional Studies units were introduced into all five years in 2011-12 and the new extended final year began in 2013-14.

4.6. The new curriculum involves a learner progressively developing knowledge and understanding of:

• normal healthy animals: individuals, groups and populations.

• disease: agents of disease, body’s response to disease, disease management.

• case management and clinical reasoning.

This is complemented by the progressive development of:

practical and clinical skills.

• professional behaviours and attitudes.

4.7. Clinical Veterinary Science (CVS) spans Years 3 to 5 and is mostly based at Langford. Case-based learning has been introduced from Year 1 and is integrated with the other themes, e.g. cases are utilised in Animal Health Science and Animal Disease to provide clinical context. The CVS theme will encompass the current units and elements of Basic Clinical Science, Therapeutics, Farm and Companion Animal Sciences and the extended final year (see below). This part of the curriculum will begin in the academic year 2015/16. Students will develop the skills to manage cases on an individual animal, group and population basis. As well as traditional lectures, clinical reasoning skills will be developed further by small group case-based learning in the classroom and on clinics.

4.8. In parallel with the main structure, there are long strands with units in most, or all years and vertical themes embedded through the curriculum:

• Professional Studies - this includes a unit in each year and five elements on communication skills, professional conduct, ethics and the law, business management, health and safety, study, learning and investigation. These units were implemented in 2011/2012 and continue to be reviewed and updated.
as part of the new curriculum. In Year 5 all students have the opportunity to apply for several jobs in the virtual "Langford Record", submit their CV and a covering letter and participate in mock interviews with employers (from local practices, alumni and industry).


- **Other vertical themes** - These describe and signpost a number of ‘themes within units’ where aspects of each are taught in most, if not all years, and include ‘Evidence Based Veterinary Medicine’, ‘Clinical, Practical & Laboratory Skills’, ‘Veterinary Public Health’ and additional themes with major components in the new Year 3 and 4 e.g. ‘Research Skills’.

- **Extended final year** - Until 2013 the final year had been constrained to traditional academic term times, which limited students’ access to LVS cases (the primary clinical learning resource) and EMS practices. The new extended final year addresses both these issues and is spread over 44 rather than 30 weeks. Students undertake 21 weeks of core rotations followed by 4 weeks of track rotations, a Professional Studies week, a Global Health week and a three-week elective, interspersed with EMS placements. The new structure enhances the student experience by improving access to cases, reducing group sizes, and allowing the timing of EMS placements to be optimised (e.g. to allow for seasonality of certain activities). Track and elective rotations allow students to extend experience while focussing on an area(s) of their choice to enhance employability.

- **Classroom to Clinic (C2C)** - a one-week element introduced in the existing Year 4 will be extended to three weeks in the new Year 4 prepares students for the clinical environment.

- **Research Project** - all students will undertake a research project in two parts over Years 3 and 4. Many Bristol students have undertaken vacation projects and intercalated degrees, supported primarily by the Wellcome Trust’s Clinical Veterinary Research Training initiative (CVTRI). Several options are currently being considered and will be informed by current evidence relating to the inclusion of research in professional degrees and whether the financial resource is available.

4.9. An extended final year was introduced in May 2013 rather than waiting for the new curriculum to reach Year 5 in 2017-18. Clinical Veterinary Science consists of 22 weeks of core teaching (comprising 21 weeks of clinical rotations and a week of experiential learning activities relating to Global Health), four weeks of track (student-selected) rotations, and a three-week elective period. The 21 weeks of core rotations are delivered over a 30 week period starting in mid-May and finishing in late December. Students rotate between on-site clinical rotations (intra-mural rotations-IMR), off-site clinical rotations (extramural rotations - EMR), off-site extra-mural placements (clinical EMS) and vacation time. Students also have a week of experiential learning related to Professional Studies.

4.10. Students attend core clinical rotations in seven blocks of three weeks. Each student spends time in the disciplines shown in Table 4.k. Track rotations, Professional Studies and One Health teaching takes place between January and March. Each student then undertakes a three week elective period, choosing from a wide range of subjects.

4.11. The aims of core rotations are to:
• equip students with the skills to apply previously gained knowledge within the clinical context to meet the Day One Competences

• enable students to develop problem-solving and clinical reasoning skills by applying their knowledge of the underpinning scientific basis of pathophysiology, diagnosis, treatment, prevention and management of disease.

4.12. Track rotations aim to enable students to gain further experience and consolidate their Day One Competences by focussing on an area(s) in more depth (usually a species-specific area), and to further develop skills of problem-solving and clinical reasoning.

4.13. The elective period aims to help students integrate and further their knowledge and understanding of underpinning scientific principles and their application in the clinical context. This will enhance their ability to solve problems in the clinical (or research) setting, and allow them to demonstrate their ability to evaluate published research in an informed manner.

Table 4.c: General table of curriculum hours taken by all students - Curriculum followed by current final year students (from October 2010 to June 2015)

<table>
<thead>
<tr>
<th>Year</th>
<th>Hours of training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theoretical training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lectures (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>1</td>
<td>233</td>
<td>6</td>
<td>93</td>
<td>105.5</td>
</tr>
<tr>
<td>2</td>
<td>251.5</td>
<td>4</td>
<td>156.5</td>
<td>107</td>
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<tr>
<td>3</td>
<td>287.5</td>
<td>6</td>
<td>82</td>
<td>94.5</td>
</tr>
<tr>
<td>4</td>
<td>290</td>
<td>35</td>
<td>62</td>
<td>7</td>
</tr>
<tr>
<td>5*</td>
<td>20**</td>
<td>1120***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1062</td>
<td>71</td>
<td>393.5</td>
<td>314</td>
</tr>
</tbody>
</table>

* "Extended final year" starts during the last 4 weeks of fourth year, continues through the summer vacation and throughout fifth year.

**10 hours seminars in Global Health week & 10 hours seminars in Professional Studies week.

***28 weeks on clinical rotations with 40 hour week, clinics, seminars and self-directed learning.
Table 4.d: Curriculum hours taken by all students - First & second years of new curriculum (2014-15)

<table>
<thead>
<tr>
<th>Year</th>
<th>Hours of training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theoretical training</td>
</tr>
<tr>
<td></td>
<td>Lectures (A)</td>
</tr>
<tr>
<td>1</td>
<td>218.5</td>
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<tr>
<td>2</td>
<td>242</td>
</tr>
<tr>
<td>Total</td>
<td>460.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Hours of training</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theoretical training</td>
</tr>
<tr>
<td></td>
<td>Lectures (A)</td>
</tr>
<tr>
<td>3</td>
<td>286</td>
</tr>
<tr>
<td>4</td>
<td>289</td>
</tr>
<tr>
<td>Total</td>
<td>575</td>
</tr>
</tbody>
</table>

Note: Year 3 of the new curriculum from 2015-16 which includes the following units:

- Animal Disease 2
- Clinical Veterinary Science 1
- Research Project 1
- Professional Studies 3

Note: Year 4 of the new curriculum from 2016-17 which includes the following units:

- Clinical Veterinary Science 2
- Research Project 2
- Professional Studies 4
- Classroom to Clinic
Table 4.e: Curriculum hours in EU-listed subjects taken by each student - Curriculum followed by current final year students (from October 2010 to June 2015)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures* (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>Lectures* (A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminars (B)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-directed learning (C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory and desk based work (D)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-clinical animal work (E)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical training (F)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Basic Subjects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Lectures* (A)</th>
<th>Seminars (B)</th>
<th>Self-directed learning (C)</th>
<th>Laboratory and desk based work (D)</th>
<th>Non-clinical animal work (E)</th>
<th>Clinical training (F)</th>
<th>(G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy (incl. and embryology)</td>
<td>103</td>
<td>0</td>
<td>78</td>
<td>1.5</td>
<td>167</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Physiology (incl. histology)</td>
<td>132</td>
<td>2</td>
<td>23</td>
<td>131</td>
<td>0</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>Biochemistry, cellular and molecular biology</td>
<td>44</td>
<td>4</td>
<td>26</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Genetics (including molecular genetics)</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pharmacology and pharmacy</td>
<td>57</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6.5</td>
</tr>
<tr>
<td>Pharmacology and pharmacy</td>
<td>57</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6.5</td>
</tr>
<tr>
<td>Toxicology (including environmental pollution)</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Microbiology (including virology, bacteriology and mycology)</td>
<td>40</td>
<td>0</td>
<td>8</td>
<td>41</td>
<td>0</td>
<td>0</td>
<td>89</td>
</tr>
<tr>
<td>Immunology</td>
<td>16</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Epidemiology (including scientific and technical information &amp; documentation methods)</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>9.5</td>
</tr>
<tr>
<td>Professional ethics</td>
<td>7.5</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2- Total number of hours</td>
<td>432.5</td>
<td>8</td>
<td>166</td>
<td>192</td>
<td>167</td>
<td>0</td>
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</tr>
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*
Table 4.e: Continued

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures* (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Clinical Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obstetrics</td>
<td>Included in units in years 1-5, primarily Animal Management, Farm Animal Science, Companion Animal Science and final year in clinical rotations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology (including pathological anatomy)</td>
<td>60.5</td>
<td>0</td>
<td>47</td>
<td>31</td>
</tr>
<tr>
<td>Parasitology</td>
<td>29</td>
<td>0</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Clinical medicine and surgery (including anaesthetics)</td>
<td>47</td>
<td>4</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Clinical medicine and surgery (companion animal)</td>
<td>163</td>
<td>23</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Clinical medicine and surgery (farm animal)</td>
<td>72</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Clinical lectures on various domestic animal, poultry and other animal species including</td>
<td>Included in Clinical medicine &amp; surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field veterinary medicine (ambulatory clinics)</td>
<td>Included in Clinical medicine &amp; surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventive Medicine</td>
<td>Included in Clinical medicine &amp; surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnostic imaging (including radiology)</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reproduction and reproductive disorders</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Veterinary state medicine and public health</td>
<td>14</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Veterinary legislation and forensic medicine</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Therapeutics</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Propaedeutics (including laboratory diagnostic methods)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>3- Total number of hours</td>
<td>426.5</td>
<td>47</td>
<td>82</td>
<td>69</td>
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</table>
### Table 4.e: Continued

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures* (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>4. Animal Production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal production</td>
<td>33</td>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Animal nutrition</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>1.5</td>
</tr>
<tr>
<td>Agronomy</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rural economics</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Animal husbandry</td>
<td>27</td>
<td>4</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Veterinary hygiene</td>
<td>1</td>
<td>0</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Ethology and protection</td>
<td>31</td>
<td>2</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>4- Total number of hours</td>
<td>113</td>
<td>6</td>
<td>51</td>
<td>15.5</td>
</tr>
<tr>
<td>5. Food hygiene/Public Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection and control of animal foodstuffs of animal origin and the feedstuff production unit</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Food hygiene &amp; technology</td>
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</tr>
<tr>
<td>Food science including legislation</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Practical work (including work in places where slaughtering and processing of foodstuffs takes place)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5- Total number of hours</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. Professional Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice management</td>
<td>8</td>
<td>5</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Veterinary certification &amp; report writing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Career planning &amp; opportunities</td>
<td>11</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6- Total number of hours</td>
<td>19</td>
<td>10</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

*Lectures are considered to be 1 hour blocks, but actually comprise 45 minute sessions with 5 minutes of Q&A followed by 10 minutes of travel time.*
### Table 4.f: Curriculum hours in EU-listed subjects taken by each student - First and second years of new curriculum (2014-15)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lectures (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
</tr>
<tr>
<td>1</td>
<td>Basic Subjects</td>
<td>Total number of hours</td>
<td>Covered before commencing degree</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>277.5</td>
<td>11</td>
<td>28</td>
</tr>
</tbody>
</table>

### Basic Sciences: Subjects which will have further teaching in Years 3-5:

- Pharmacology and pharmacy
- Toxicology
- Microbiology
- Epidemiology (but these will be labelled with clinical medicine headings, not double counted)
- Professional Ethics
### Table 4.f: Continued

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>Lectures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminars</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Self-directed learning</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Laboratory and desk based work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-clinical animal work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(G)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Clinical Sciences                                 |                      |                                |       |       |       |       |       |       |
|                                                   |                      |                                |       |       |       |       |       |       |
| Obstetrics                                        |                      |                                |       |       |       |       |       |       |
| Pathology (including pathological anatomy)        | 13                   | 4                              | 0     | 10    | 0     | 0     | 0     | 27    |
| Parasitology                                     | 27                   | 4                              | 0     | 12    | 0     | 0     | 0     | 43    |
| Clinical medicine and a surgery (including anaesthetics) |                      |                                |       |       |       |       |       |       |
| Genetics (including molecular genetics)           |                      |                                |       |       |       |       |       |       |
| Clinical lectures on various domestic animal, poultry and other animal species including |                      |                                |       |       |       |       |       |       |
| Field veterinary medicine (ambulatory clinics)    |                      |                                |       |       |       |       |       |       |
| Preventive Medicine                              |                      |                                |       |       |       |       |       |       |
| Diagnostic imaging (including radiology)          |                      |                                |       |       |       |       |       |       |
| Reproduction and reproductive disorders           |                      |                                |       |       |       |       |       |       |
| Veterinary state medicine and public health       | 5                    | 0                              | 0     | 0     | 0     | 0     | 0     | 5     |
| Veterinary legislation and forensic medicine      | 1                    | 0                              | 0     | 0     | 0     | 0     | 0     | 1     |
| Therapeutics                                     | 1                    | 0                              | 0     | 0     | 0     | 0     | 0     | 1     |
| Propaedeutics (including laboratory diagnostic methods) |                      |                                |       |       |       |       |       |       |
| Covered in years 3-4                             |                      |                                |       |       |       |       |       |       |
| 3- Total number of hours                         | 47                   | 8                              | 0     | 22    | 0     | 0     | 0     | 77    |

**Clinical Sciences:** Subjects which will have further teaching in Years 3-5:

- All Clinical Sciences. NB, there will be further teaching covering parasites in clinical medicine lectures, but this will not be labelled as pure parasitology (cannot be double counted).
<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>4. Animal Production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal production</td>
<td>32 0 8 1 24 0</td>
<td></td>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td>Animal nutrition</td>
<td>13 2 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agronomy</td>
<td>1 0 0 0 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural economics</td>
<td>1 2 4 1 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal husbandry</td>
<td>30 8 0 3 19.5 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Animal ethology and protection</td>
<td>2 0 0 1.5 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4- Total number of hours</td>
<td>96 15.5 15 8</td>
<td></td>
<td></td>
<td>45.5</td>
</tr>
<tr>
<td>5. Food hygiene/Public Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspection, and control of animal foodstuffs of foodstuff of animal origin and the respective feedstuff production unit</td>
<td>2.5 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Food hygiene &amp; technology</td>
<td>4 0 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Food science including legislation</td>
<td>1 0 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Practical work (including practical work in places where slaughtering and processing of foodstuffs takes place)</td>
<td>Covered in years 3-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5- Total number of hours</td>
<td>7.5 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>6. Professional Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice management</td>
<td>5 0 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Veterinary certification &amp; report writing</td>
<td>0 0 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Career planning &amp; opportunities</td>
<td>0 0 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>6- Total number of hours</td>
<td>5 0 0 0 0</td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>
**Animal Production:** Subjects which will have further teaching in Years 3-5:

- Veterinary hygiene
- Animal ethology and protection
- The other subjects listed may be included in Clinical Medicine teaching, but are not labelled under these headings to avoid double counting

**Food hygiene/Public Health:** Subjects which will have further teaching in Years 3-5:

- Inspection and control
- Food hygiene and technology
- Practical work

**Professional Knowledge:** Subjects which will have further teaching in Years 3-5:

- All topics

### Table 4.g: Curriculum hours in EU-listed subjects offered and to be taken as electives (track)

<table>
<thead>
<tr>
<th>Rotation divisions</th>
<th>Rotation</th>
<th>Weeks</th>
<th>Max No. of students per week of rotation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4 weeks or combination with equine)</td>
<td>Anaesthesia</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Canine medicine</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Cardiorespiratory</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Feline medicine</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>FOSAP/PDSA</td>
<td>1</td>
<td>5/1</td>
</tr>
<tr>
<td></td>
<td>ICU/Emergency medicine</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Imaging</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Neurology/Ophthalmology</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Orthopaedics</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Soft tissue surgery</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Zoo &amp; exotic pet medicine</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Equine</td>
<td>Equine</td>
<td>2 or 3</td>
<td>9-12</td>
</tr>
<tr>
<td>Farm</td>
<td>LVS Farm Animal Practice – first opinion</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Population Medicine (Dairy)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Population Medicine (Non-dairy)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Shepton / Delaware</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 4.h: Clinical rotations – elective (student choice)

<table>
<thead>
<tr>
<th>Rotation divisions</th>
<th>Rotation</th>
<th>Weeks</th>
<th>Max students per rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small animal</td>
<td>Anaesthesia</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Anaesthesia</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Canine &amp; emergency medicine</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Cardiorespiratory</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Clinical Pathology</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Diagnostic imaging</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Feline medicine</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>FOSAP/Communication</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>FOSAP/Exotic pets</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Neurology</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Ophthalmology</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Pathology</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Research</td>
<td>3</td>
<td>Open</td>
</tr>
<tr>
<td></td>
<td>Small animal surgery (STS/Ortho)</td>
<td>3</td>
<td>3/3</td>
</tr>
<tr>
<td></td>
<td>Zoo medicine</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Equine</td>
<td>Equine</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Farm</td>
<td>Farm animal sciences</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Other</td>
<td>Enterprise &amp; Innovation</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Electives are a variable mixture of clinical work, seminars and project work.

Table 4.i: Curriculum hours in subjects not listed in Table 4.2 to be taken by each student

Curriculum followed by current final year students – October 2010 – June 2015

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>Information &amp; support</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>0.5</td>
</tr>
<tr>
<td>H&amp;S</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Communication skills</td>
<td>6.5</td>
<td>0</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>EBVM</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Integrated DSE</td>
<td>0</td>
<td>0</td>
<td>56.5</td>
<td>0</td>
</tr>
<tr>
<td>Research training</td>
<td>4</td>
<td>0</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>42.5</td>
<td>0</td>
<td>82.5</td>
<td>34.5</td>
</tr>
</tbody>
</table>
### Table 4.j: First and second years of new curriculum

<table>
<thead>
<tr>
<th>Subject</th>
<th>Theoretical training</th>
<th>Supervised practical training</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lectures (A)</td>
<td>Seminars (B)</td>
<td>Self-directed learning (C)</td>
<td>Laboratory and desk based work (D)</td>
</tr>
<tr>
<td>Information &amp; support</td>
<td>10.5</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Integrated Structure &amp; Function</td>
<td>0</td>
<td>20</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>H&amp;S</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Communication skills</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>12.5</td>
</tr>
<tr>
<td>EBVM</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Research training</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Statistics</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Veterinary researcher</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total number of hours</strong></td>
<td><strong>25.5</strong></td>
<td><strong>23</strong></td>
<td><strong>41</strong></td>
<td><strong>26.5</strong></td>
</tr>
</tbody>
</table>

### Table 4.k: Core clinical rotations

<table>
<thead>
<tr>
<th>Rotation Divisions</th>
<th>Rotation</th>
<th>Weeks</th>
<th>No. of students per rotation (2013-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core 1</td>
<td>Anaesthesia</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Equine medicine &amp; surgery</td>
<td>3</td>
<td>10-12</td>
</tr>
<tr>
<td></td>
<td>Dermatology</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Veterinary pathology</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Clinical pathology</td>
<td>2.5 days</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Ophthalmology</td>
<td>2.5 days</td>
<td>3-5</td>
</tr>
<tr>
<td>Core 2</td>
<td>Farm animal practice</td>
<td>2</td>
<td>7-9</td>
</tr>
<tr>
<td></td>
<td>Population and evidence based veterinary medicine</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Veterinary public health</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Anaesthesia</td>
<td>2</td>
<td>7-9</td>
</tr>
<tr>
<td>Core 3</td>
<td>Canine medicine</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Feline medicine</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>ICU/Emergency medicine</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td>Core 4</td>
<td>First opinion small animal practice</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Imaging</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Small animal charity placement</td>
<td>2</td>
<td>8-9</td>
</tr>
<tr>
<td></td>
<td>Small animal surgery – soft tissue</td>
<td>1</td>
<td>3-5</td>
</tr>
<tr>
<td></td>
<td>Small animal surgery – orthopaedics</td>
<td>1</td>
<td>3-5</td>
</tr>
</tbody>
</table>
Table 4.l: Obligatory extramural work

As carried out by current final year students 2010-2015

<table>
<thead>
<tr>
<th>Nature of work</th>
<th>Number of weeks</th>
<th>Year in which work is carried out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-clinical EMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep/lambing</td>
<td>3</td>
<td>Easter Y1</td>
</tr>
<tr>
<td>Equine/stables</td>
<td>2-3</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td>Veterinary practice (nursing)</td>
<td>1-2</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td>Dairy</td>
<td>2-3</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td>Pigs</td>
<td>2-3</td>
<td>Preferably summer Y2</td>
</tr>
<tr>
<td>Other (beef/goats/camelids/laboratory animals/petting zoos/zoos/fish/poultry etc.)</td>
<td>1-2</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td><strong>Total pre-clinical EMS</strong></td>
<td>12 weeks</td>
<td>12 weeks</td>
</tr>
<tr>
<td><strong>Clinical EMS</strong></td>
<td>26 weeks including 10-12 weeks with Foster Practice</td>
<td>26 weeks including 10-12 weeks with Foster Practice</td>
</tr>
</tbody>
</table>

Table 4.m: New curriculum, 2013-14 onwards

<table>
<thead>
<tr>
<th>Nature of work</th>
<th>Number of weeks</th>
<th>Year in which work is carried out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-clinical EMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep/lambing</td>
<td>2</td>
<td>Easter Y1</td>
</tr>
<tr>
<td>Equine/stables</td>
<td>2</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td>Small animal practice (nursing) or kennels/cattery</td>
<td>≥ 1</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td>Dairy</td>
<td>2</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td>Pigs and/or poultry</td>
<td>1 of each or 2 of either</td>
<td>Summer Y2</td>
</tr>
<tr>
<td>Exotics/wildlife</td>
<td>Optional</td>
<td>Summer Y2</td>
</tr>
<tr>
<td>Other (beef/goats/camelids/lab animals/petting zoos/zoos/fish etc.)</td>
<td>Any combination, but any placement must be ≥ 1 week</td>
<td>From end of Summer term Y1</td>
</tr>
<tr>
<td><strong>Total pre-clinical EMS</strong></td>
<td>12 weeks</td>
<td>By end of summer vacation following Y2</td>
</tr>
<tr>
<td><strong>Clinical EMS</strong></td>
<td>26 weeks (6 weeks preparatory and 20 weeks practical EMS) including 10-12 weeks with Foster Practice</td>
<td>Y3-5</td>
</tr>
</tbody>
</table>

During the Easter and Summer vacations of third year students should undertake a minimum of 8-10 weeks EMS, with a minimum of 6 weeks in Foster placement.
Table 4.n: Ratios

General indicators types of training

<table>
<thead>
<tr>
<th></th>
<th>Supervised practical training</th>
<th>Theoretical training</th>
<th>Minimum</th>
<th>1.11</th>
<th>above</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6</td>
<td></td>
<td></td>
<td>0.602</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Laboratory and desk based work + non clinical animal work</th>
<th>Clinical Work</th>
<th>Maximum</th>
<th>0.51</th>
<th>below</th>
</tr>
</thead>
<tbody>
<tr>
<td>R7</td>
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<td></td>
<td>1.809</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Teaching load</th>
<th>Self directed learning</th>
<th>Recommended range²</th>
<th>8.48</th>
</tr>
</thead>
<tbody>
<tr>
<td>R8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

²: No figures are given in Annex One. Supplement A – Ratios (www.eaeve.org/03.04.2014) however ratios of SVS Bristol are within the range published earlier by EAEVE.

Special indicators of training in food hygiene/public health

<table>
<thead>
<tr>
<th></th>
<th>Total no. vet. curriculum</th>
<th>Recommended range²</th>
<th>27.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>R9</td>
<td>Total no. curriculum-hours Food Hygiene/Public Health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Hours obligatory extramural work in veterinary inspection</th>
<th>Recommended range²</th>
<th>none³</th>
</tr>
</thead>
<tbody>
<tr>
<td>R10</td>
<td>Total no. curriculum-hours Food Hygiene/Public Health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

²: No figures are given in Annex One. Supplement A – Ratios (www.eaeve.org/03.04.2014) however ratios of SVS Bristol are within the range published earlier by EAEVE.

³: Extramural veterinary inspection regarding veterinary public health is not in the curriculum, it is compensated by the work at the slaughter house of SVS

Comments

4.14. The School has undertaken a major curriculum review and is implementing a more modern and focused curriculum. The process has been rapid and intense and additional resource has been provided by the Faculty and the School to support the project. At the time of the visit the first and final years of the programme had been completed once and the revised second year had been running for 2 months. The 3rd and 4th years of the programme had just been approved and detailed learning outcomes were being planned. There was obvious engagement and buy-in by staff and students in the review process and appreciation of the more integrated and active learning approach being introduced. The detailed planning for the 3rd and 4th years of the programme had not yet been completed, which made evaluation of the total curriculum difficult. An aspect of the proposed revised curriculum that the Visitors support but for which the future is unclear is the Research Project. The future of this project depends on adequate funding being available to support its implementation. A business case has been made for this and the School acknowledges the need to fund the research activities that will be necessary. Research Project 1 is meant to be a literature study leading up to a potential research plan that is then developed further and executed.
in Research Project 2.

The Visitors concluded that if the implementation of the 3rd and 4th year curriculum proceeds as well as the 1st and 2nd years appear to have, the learning objectives of the new curriculum should be achieved. However, at the time of the visit, there was insufficient detail to allow evaluation of the proposed 3rd and 4th year teaching.

Commendations

4.15 Early introduction of some features of the revised curriculum such as the extended final year and some case-based and more active learning to 3rd and 4th years is commended.

4.16 Enthusiastic and energetic staff participation in the curriculum review process is commended.

Suggestions

4.17 It is suggested that aspects of the integrated learning programme be made more explicit, for example in major areas such as Public Health and Epidemiology.

Recommendations

4.18 Curriculum mapping software should be implemented as soon as is possible to allow interrogation of the curriculum to ensure topic coverage, outcome coverage and assistance in blueprinting examinations and assuring alignment of teaching and assessment.
Curriculum – basic subjects and sciences

The instruction in basic subjects, (physics, chemistry, animal biology, plant biology, biomathematics) may be given as part of, or in association with, other disciplines of the veterinary course. They could also advantageously be taken prior to entry to the veterinary course. These subjects should provide a solid background in chemical, physical and biological sciences, with the objective of preparing students for the subjects to be taught later in the veterinary curriculum.

Instruction in basic sciences must provide students with an understanding of the fundamental biological principles and mechanisms underlying animal health, disease and therapy, from the molecular and cellular level to the level of the organ, the whole animal and animal populations. This includes an understanding of the biological basis of normal structure and function, the mechanisms governing homeostasis, the physiopathology of organ systems and the biological and pharmacological evidence-based mechanisms, by which disordered states may be returned to normal.

The teaching must also cover the biology of agents that cause and transmit diseases from animal to animal and from animal to man, the transmission mechanisms and the mechanisms by which animals defend themselves against infectious agents and how these mechanisms can be induced.

The basic sciences must include:

Anatomy, Physiology, Biochemistry, Genetics, Pharmacology & Pharmacy, Toxicology (including environmental pollution), Microbiology (including virology, bacteriology and mycology), Immunology, Epidemiology (including scientific and technical information and documentation methods), Professional ethics.

Findings

4.19. There are 3 Animal Health Science (AHS) units which encompass and integrate the traditional disciplines of Anatomy, Physiology and Biochemistry and are taught in Year 1 and part of Year 2. The theme begins with a 6 week introductory ‘AHS Foundation unit’ which provides basic knowledge and understanding of cells, tissues, organs and body structures and is a foundation for the next two AHS units and the BVSc programme. In the second unit ‘AHS 1’ (in Year 1) and third unit ‘AHS 2’ (in Year 2) students learn about the integrated structure and function of the body systems in the following elements; cardiac & respiratory; alimentary & renal; reproductive & endocrine; neurological & associated senses; locomotor and associated systems of the common domestic species, followed by a short element on exotic animals.

4.20. See Tables 4.e. section 2 and 4.f. section 2 for the number of hours given to the teaching of basic sciences.

Comments

4.21. First and second year students appreciated the integrated nature of their learning programme and commented on their appreciation of the early introduction of the clinical relevance of their learning in the basic sciences, as applied to knowledge and skills.

Suggestions

4.22. None.

Recommendations

4.23. None.
Curriculum – clinical sciences

The course of instruction in the basic sciences (pre- and para-clinical subjects) should have laid the necessary groundwork on which to build clinical knowledge and skills.

Propaedeutic training, as listed in the Annex V.4 of Directive 2005/36/EC, must provide the skills required to examine the patient or analyse the case, collect the clinical and laboratory data as the fundamental basis for a diagnostic and therapeutic plan for the case.

Intramural clinical training must be provided so all students receive a common clinical grounding, encompassing all species and disciplines, in accordance with the Directive 2005/36/EC, Annex V, and adequately enable veterinary surgeons to perform basic clinical duties in all species, if required (see the list of essential competences required at graduation, the so-called “day-one skills” in Annex 4. The time allotted for training in clinical sciences should account for at least 40% of the entire curriculum. This does not preclude the acquisition of additional knowledge in selected areas for which there is less demand as considered in the Directive 2005/36/EC.

Extramural clinical training and exposure to patient-driven clinical services are, albeit encouraged, only to be considered supplementary to the intramural clinical instruction provided by the Faculty, with equal consideration to teaching hospital (stationary) clinics or ambulatory (mobile) clinical services, which should remain the core of the intramural clinical instruction.

The clinical sciences must include:

- Obstetrics,
- Pathology (including pathological anatomy),
- Parasitology,
- Clinical medicine and surgery (including anaesthetics);
- Clinical lectures on the various domestic animals, poultry and other animal species;
- Preventive medicine,
- Radiology, (diagnostic imaging)
- Reproduction and reproduction disorders,
- Veterinary state medicine and public health,
- Veterinary legislation and forensic medicine,
- Therapeutics,
- Propaedeutics.

The above subjects are general subjects. Faculties should ensure that students are exposed to all major areas of clinical specialisation.
Findings

4.24. There are 2 Animal Disease (AD) units which encompass the disciplines of Pathology, Parasitology, Microbiology and Pharmacology and are, and will be, taught in Year 2 and part of Year 3. In ‘AD 1’ in Year 2 students are introduced to disease mechanisms and agents including microbes and parasites, immunology and basic pathology and pharmacological principles followed by more in depth coverage of the common parasites, therapies and control mechanisms. In Year 3, ‘AD 2’ will provide more in depth coverage of microbes, therapies and preventative measures and Veterinary Public Health.

4.25. See Tables 4.e. section 3 and 4.f. section 3 for the number of hours given to the teaching of clinical sciences.

Comments

4.26. The relevant topics are all covered in the current curriculum and appear to be in the proposed new curriculum.

4.27 Even-though access to pigs is extremely difficult, pig medicine and pig diseases are taught.

Suggestions

4.28. Given the difficulty in accessing pig herds, the Clinical Skills Laboratory would benefit from a model to train students in blood sampling in pigs.

Recommendations

4.29. None.
Curriculum – animal production

Animal Production is the broad term used to describe the entire discipline of breeding, rearing and disposal of food-producing animals and their products by sale, slaughter for food or as waste. Tuition must cover the major food-producing species (cattle, sheep and/or goat, pigs, poultry, rabbits, and equine) and one example of a farmed fish species. Knowledge of animal production in its broad sense is essential for the veterinarian in order that changes in normal behaviour and management can be detected, animals can be handled safely, treatment can be given in an appropriate manner and appropriate recommendations can be made for prophylactics and care.

The training must be oriented towards the application of prophylactics and clinical treatment on individual and herd basis, preventive veterinary medicine (e.g. herd health) and management of epidemic diseases, reproductive management, housing of animals and feeding regimes. The training provided should allow veterinarians to derive proper data for food chain information and possible risks to human health.

Training must familiarise students with the normal methods for the disposal or recycling of animal waste and the common requirements for ethical, environmentally-sound and hygienic disposal of the bodies of companion animals and the carcasses of food-producing animals.

Training must provide adequate knowledge on animal welfare issues, covering rearing and holding on-farm until slaughter.

Knowledge of the economics of animal rearing enterprises and their place in the rural economy is required to make informed decisions about disease control and euthanasia.

The importance of genetics in animal breeding and trade as well as for disease resistance should be understood.

Theoretical and practical training must cover the broad requirements of the individual member states.

Theoretical instruction should be accompanied by practicals which provide the confidence to handle major domestic animal species safely and the ability to carry out basic tasks in animal management, breeding and rearing.

The animal production subjects must include:

- Animal production (the domestic food-producing animal species in society and the economy)
- Animal nutrition (nutrition and feeding of food-producing species)
- Agronomy (cropping, grazing and land use in relation to food-producing animal species)
- Rural economics (animals as a business and their importance in the countryside)
- Animal husbandry (housing, management and reproductive management systems, including artificial reproduction techniques, e.g. artificial insemination, multiple ovulation and embryo transfer).
- Veterinary hygiene (farm layout, drainage, cleaning, disinfection and bio-security)
- Animal ethology and protection (behaviour, social organisation in animal populations and common welfare issues, including behavioural disorders and their remediation)
Relevant and appropriate consideration of the principles above should also be applied to the major non food producing animals like the dog and cat.

Findings

4.30. See Tables 4.e. section 4 and 4.f. section 4 for the number of hours given to the teaching of animal production.

Comments

4.31. These topics appear to be well covered in the core curriculum and are supplemented by further opportunities for gaining experience in EMS and elective rotations.

Suggestions

4.32. None.

Recommendations

4.33. None.
Curriculum – food hygiene and technology and veterinary public health

The training must ensure that each student understands the fundamentals of veterinary public health, food science and modern food technology, the scientific basis of the relationship between food and human health, and the factors underlying the quality of hygiene (of food and the environment).

Directive 2005/36/EC, Annex V.4, 5.4.1, requires therefore adequate knowledge of the hygiene and technology involved in the production, manufacture and putting into production of animal foodstuffs or foodstuffs of animal origin. It further requires adequate knowledge of the laws, regulations and administrative provisions relating to the production of such foodstuffs. Veterinary public health/Food hygiene education for veterinarians must therefore ensure that, on graduation, they can be trained by the Competent Authority (CA) to carry out the audits described in the appropriate food hygiene regulations.

Study programmes should therefore build on a sound knowledge in the field of veterinary public health/food hygiene so that students:

- know how to carry out ante-mortem inspection on farm or in the abattoir and assess the welfare of the animals concerned.
- be familiar with veterinary public health and the respective legal regulations.
- understand post-mortem inspection and possess basic practical skills within the food production business and inspection requirements.
- understand the importance of risk-based monitoring of the processes (HACCP concept). These tasks require a sound knowledge of the pathology, microbiology, parasitology, pharmacology and toxicology of food animals, of epidemiology and of the legal requirements, allowing them to ensure public health and report back along the food chain to the farmer and to the Competent Authority.
- interpret the information returned by the Food Business Operator to the farm so as to benefit production, animal welfare and public health.
- acquire an acceptable knowledge of the principles of Food Hygiene Legislation at EU-level and in the individual state.

The veterinary food hygiene/public health subjects must include:

- Inspection and control of animal foodstuffs or foodstuffs of animal origin and of the respective feed-stuff production units
- Food hygiene and technology
- Food science including legislation
- Practical work (including practical work in places where slaughtering and processing of foodstuffs takes place).

The course of instruction must cover subjects necessary to prepare the graduate to perform effectively not only in the traditional veterinary practice, but also in other common professional roles.
Undergraduates must receive broad information on the different opportunities of post-graduate training and specialisation.

Findings

4.34. See Tables 4.e. section 5 and 4.f. section 5 for the number of hours given to the teaching of food hygiene/public health.

Comments

4.35. This area of the curriculum was investigated specifically since the documentation for years 3 and 4 was incomplete. As a result of this enquiry it was concluded that teaching in public health met EAEVE guidelines and European standards.

Suggestions

4.36. None.

Recommendations

4.37. None.
Curriculum – professional knowledge

Professional knowledge subjects must include:

- Practice management
- Veterinary certification and report writing
- Career planning and opportunities

Findings

4.38. See Tables 4.e. section 6 and 4.f. section 6 for number of hours spent on teaching practice management and career planning and opportunities. No hours are given to the teaching of veterinary certification and report writing.

Comments

4.39. Time is spent on professional knowledge throughout the programme through a vertically integrated professional studies subject that occurs in all 5 years. One feature of this is a series of mock job applications and interviews conducted by local veterinary surgeons with all final year students.

Suggestions

4.40. None.

Recommendations

4.41. The School must provide some education on veterinary certification and report writing as part of its professional knowledge teaching.
Chapter 5 – Teaching, quality and evaluation

The teaching of basic sciences

One of the major objectives is the acquisition of problem-solving skills. To this end, instruction must cover the methods of acquiring, documenting and analyzing scientific and technical data.

Practical training must serve to familiarize students with subjects studied in theoretical courses and to give them some insight into how scientific knowledge might be acquired. Practical training does not mean simply observing the teacher during demonstrations. Acquisition of generic problem-solving skills is required.

Findings

5.1. The School of Veterinary Sciences (SVS) has ownership of the BVSc Programme. The programme is the responsibility of the Programme Director (currently Professor Baillie) who, reporting directly to the Head of School, chairs a suitably constituted curriculum committee the Veterinary Programme Committee (VPC). All Schools involved in the delivery of the programme are represented on VPC, which is attended by student representatives and academic year leads.

5.2. VPC monitors all matters relating to the BVSc curriculum. Minutes of VPC meetings are made available to all members of VPC and other stakeholders (Faculty Manager, Faculty Education Director, Heads of Schools etc.) and are available on Bristol’s Virtual Learning Environment (VLE).

5.3. Management of the delivery of teaching and assessment in SVS is the responsibility of the Head of Teaching (currently Professor Baillie, although the roles of Programme Director and Head of Teaching could be undertaken by different people). The Programme Director works with the Heads of Teaching in other Schools in the Faculty to ensure effective delivery of the Programme.

5.4. Teachers and where appropriate, non-academic members of staff are involved in the evaluation and discussion of teaching, learning and assessment within their own unit. Units within each year of the programme are overseen by the year lead, supported by a nominated member of the student administration team reporting through VPC to the Programme Director.

5.5. The new BVSc curriculum has been designed and delivered within the pedagogic framework of the University’s Education Strategy that identifies priorities for education as well as the broader student experience.

5.6. The teaching programme is lead by Professor Joanna Price as Head of School and Professor Sarah Baillie as Programme Director. The BVSc Programme has evolved in recent years in content and in the structure of the teaching and learning opportunities it provides. The programme provides a blended approach to learning and assessment. Lectures signpost fundamental concepts and in provide a framework for directed and independent learning in which students can construct their knowledge.

5.7. In the new curriculum there are usually no more than three lectures per day, along with timetabled Directed Self Education (DSE) and Directed Group-based learning. Examples of contemporary approaches
Teaching materials are delivered through Blackboard™ as the Virtual Learning Environment (VLE), providing accessibility and standardisation of quality across the programme; DSE has been adopted across all years of the Programme and effective and authentic learning opportunities have been included, with the development of re-useable computer assisted learning where appropriate. Assessment of learning has also evolved, using e-assessment (delivered through Questionmark Perception™ in many areas) to enhance the quality of the assessment process, whilst ensuring alignment with the taught curriculum.

5.8. Recommended text books are listed for all units in each year’s BVSc Year Handbook, together with an indication as to whether they are essential or additional reading. For most taught sessions, additional teaching resources are provided, which may include notes, links to internal or external online resource, online quizzes, eBiolabs exercises etc. Lecture notes are printed and provided in advance of the session (where appropriate to do so) and all materials are released through the VLE.

5.9. Elements of animal handling are introduced in the first year in the live anatomy barn where a variety of species are kept. Students are required to do a week of “Barn” duty where they attend early in the morning and provide care for the variety of small and large animal species housed in the barn. This provision is adequate currently but consideration should be given to increasing the numbers of each species available, or increasing the number of classes as student numbers increase to minimise over-use of the available stock of animals. Students also visit Langford for one day each week and instruction is also offered there. The visits to Langford serve to integrate the first year students well into the School as a whole.

Comments

5.10. All the major objectives associated with the teaching of basic sciences are being achieved.

5.11. Staff are to be congratulated on the development and delivery of a new, vertically and horizontally-integrated curriculum which integrates clinical material and the basic sciences in a relatively short time. This is especially impressive given the fact that a number of different Schools within the Faculty have had to be involved in the development and delivery of the new curriculum in years 1 and 2.

5.12. Year 1 and Year 2 students were very positive about the curriculum, citing the enthusiasm, dedication and involvement of staff delivering the programme as the best thing about the School.

5.13. Some Year 2 students felt that the course in second year was not as well integrated as that delivered in Year 1, however elements of the Year 1 course had already been delivered in an integrated way prior to the introduction of the new curriculum.

5.14. Excellent use is made of the Turning Point technology, not only for in-class assessments, but also for the determination of student attendance. The students are aware that the technology is being used to monitor attendance.

5.15. The development and use of the live animal barn in Southwell Street to consolidate and inform anatomy teaching typifies the integrated approach being developed.

Commendations

5.16. The use of eBiolabs prior to and after practical classes to introduce topics and formatively or summatively assess the students in Years 1 and 2 is commended.
Suggestions

5.17. As student numbers increase, consideration should be given to increasing the numbers of live animals or increasing the number of classes in the live animal barn, given the potential welfare implications for the limited number available of some species (see also comments in Chapter 7 – Animals and teaching material of animal origin).

Recommendations

5.18 None.
The teaching of clinical sciences

Clinical instruction must take place in groups that are small enough to ensure hands-on experience for all.

Students’ problem solving and clinical skills should be developed through their full involvement in case management under suitable supervision. The mere observation of others practising veterinary medicine and surgery is not acceptable. The instruction provided must include basic clinical training across the common domestic species. Effective monitoring systems are to be provided in cases where the Faculty cannot give hands-on teaching in a species and the student must learn this at another institution.

Time-tabled lectures should be excluded from a substantial proportion of the clinical course as they may clash with students’ case management activities.

Those responsible for theoretical clinical training must also be involved in the practical side dealt with in the institution's clinics.

The advancement of knowledge is a task involving all members of the profession. Therefore, interaction between students and clinical researchers working in the clinical field should be arranged in order to stimulate students’ interest in research.

Findings

5.19. The Head of Teaching has responsibility for the management of teaching delivery where there is collaborative provision, including that provided by LVS, and is assisted by the Head of Enterprise, Strategic Development and External Partnership.

5.20. The University uses Collaborative Provision through formal contractual arrangements with outside bodies that support its teaching in charity companion animal first opinion practice, exotics (Bristol Zoo) and farm animal practice. These arrangements are set out below and those relating to the core rotations conform with RCVS guidelines for distributed clinical teaching. The Charities are remunerated for this provision.

- Charity Companion Animal First Opinion Practice – The University has contractual arrangements with the RSPCA Greater Manchester Animal Hospital and the PDSA Pet Aid Hospital in Bristol. Under these agreements all final year students undertake a two-week block of charity companion animal first opinion practice under the direct supervision of the veterinary surgeons and with local oversight by a nominated Rotation Organiser who has received training in University of Bristol processes and policies. All staff who have contact with the students are briefed in those procedures and policies and are also invited to attend training classes alongside SVS clinicians as part of the ‘Teaching in clinics’ programme run by the School.

A more detailed description is provided as part of the BVSc Student Handbook which was seen by the Visitors. Overall aims and objectives for this rotation are consistent between the two sites: to give students the opportunity to develop the skills required to undertake routine consultations and common anaesthetic and surgical procedures (including neutering) in small animal patients. It also provides an opportunity to develop the student’s professional skills and attributes and clinical competences, and gives students the opportunity to develop skills of problem solving and clinical reasoning. Additionally,
it enhances students’ awareness of the financial restrictions of working in a charity setting.

Students maintain a log of cases seen which the School uses alongside other measures to ensure the equality of the student experience across the two sites for this rotation.

- **Farm Animal Practice** – the University has contractual arrangements with the Shepton Veterinary Group (Shepton Mallet, Somerset) and Delaware Veterinary Group (Castle Cary, Somerset) for the provision of Farm Animal teaching as part of the Farm Animal Track rotation. The practices are remunerated for this provision. A more detailed description was provided for the Visitors as part in the BVSc Student Handbook. Activities and learning opportunities provided at the two sites are intended to contribute to the overall outcomes of the Track Rotations with a focus on professional skills and attributes. As a result students are able to develop and demonstrate skills and attributes of an appropriate standard for this stage of their training.

- **Bristol Zoo** – the School has a contractual agreement with Bristol Zoo Gardens under the terms of which the School pay for a 0.5FTE (a specialist in zoo medicine) for provision of undergraduate teaching in the following areas:
  
  i. exotics species teaching to 2nd year students within the Animal Management unit
  
  ii. exotics species teaching to 4th year students within the Companion Animal Sciences unit
  
  iii. exotics species teaching in clinical examination to final year students in the track rotations
  
  iv. student electives undertaken at the zoo.

5.21. Where SVS has identified that it would not be viable to recruit permanent specialist expertise, (e.g. for the teaching of pig medicine), external veterinary surgeons, other professionals or academics from other institutions are engaged to teach on the BVSc. Occasional teaching staff are contracted on an hourly or daily basis and are provided with the learning objectives for the session to be delivered and information on format requirements.

5.22. Significant investment in the development of the Clinical Skills Laboratory has provided the structure to allow teaching and evaluation of practical skills as part of the outcomes based philosophy that underpins the new curriculum.

**Comments**

5.23. All the major objectives associated with the teaching of clinical sciences are being achieved. Group sizes are small and there is significant opportunity for students to develop problem-solving and clinical skills through full involvement in case management in all the common domestic species.

5.24. The School has its own hospital facilities for the common domesticated species which are, on the whole, modern, well-maintained and well-equipped. Small animal (referral and primary care), farm and equine practices are available on site at Langford. Further details are provided in Chapter 6 – Facilities and equipment below.

5.25. Track rotations and the electives provide opportunities for students to develop their clinical skills in areas of
5.26. Use of the Clinical Skills Laboratory helps prepare the students for the core rotations; this facility is obviously valued by the students.

5.27. New contracts have recently been signed ensuring access to core small animal rotations for another three years.

5.28. A summary of cases recorded in the students’ log of cases seen at PDSA and RSPCA suggests the case load is similar at each site although students attending PDSA would appear to have more opportunities to carry out consultations. This should be kept under review.

Commendations

5.29. The new Clinical Skills Laboratory at Langford, for its innovation and ready accessibility for students.

Suggestions

5.30. There is limited in-clinic exposure to exotic species that are only seen in the one week first opinion small animal practice rotation with some seen in the charity clinics. Given their increasing popularity, the School could consider ways to increase exposure to a traditional primary care exotic species caseload.

5.31. Additional staff from external teaching providers could usefully be encouraged to undertake training in teaching and assessment, which could be run on site by the School.

Recommendations

5.32. None.
The teaching of animal production

Those teaching the theory of animal production subjects should also be involved in practical training with the major domestic animal species. Teaching should reflect the species balance and management systems of the country. For food producing animals, practical work should be farm-case-based as much as possible.

Practical extramural courses should be encouraged as long as adequate supervision is in force.

Findings

5.33. Within Years 1 and 2, vertical Animal Production themes are responsible for delivery of teaching relating to animal production. The University also uses Collaborative Provision through formal contractual arrangements with the Cannington Centre (Bridgewater College) for the provision of some animal handling classes. The practical Animal Management sessions carried out at Cannington utilise their resource of 20 teaching horses and a range of exotic species and pigs. Access to this resource of teaching animals at one site is a major advantage. The practical sessions provide a structured learning opportunity for appropriate equine handling and management associated skills and techniques. The sessions are taught by Bristol Veterinary School clinical staff, with support from the staff of the Cannington Equine unit. The College is remunerated for this service. Classes which relate to cattle and sheep production are held at Wyndhurst Farm.

Comments

5.34. All the major objectives associated with the teaching of animal production are being achieved. The teaching reflects the species balance seen by veterinary surgeons and management systems used in the UK. Good use of the live anatomy barn, Wyndhurst Farm and the Cannington Centre is made for practical teaching of animal handling and production.

5.35. The group sizes are adequately small at the current time. However any further increase in student numbers may lead to “small group” sizes increasing unacceptably.

Suggestions

5.36. There is currently very little evidence of exposure to pigs and commercial poultry/egg production. This is an area where additional teaching, in particular herd/flock visits, might be considered (see also comments and suggestions in Chapter 7 – Animals and teaching material of animal origin).

Recommendations

5.37. None.
The teaching of food hygiene/public health

Practical training must familiarise students with the concepts of Food Business audit especially with regards to food animal origin at various stages in the food chain, particularly in slaughterhouses. Students should develop Day One Competences in the interpretation of food chain information, ante-mortem inspection and post-mortem inspection and be capable of being trained as official veterinarians by the Competent Authority.

The training must take place in groups that are small enough to ensure that all students are able to gain hands-on experience.

It should also give students the opportunity to monitor units involved in the production, processing, distributing and consumption of foodstuffs.

Extramural instruction in the training in veterinary public health and food hygiene may be used so long as it is properly supervised.

Findings

5.38. The current set-up of the School concerning veterinary public health is to provide the students with all necessary one-day skills in VPH, without the aim of a full and complete preparation to meet the Official Veterinarian (OV) criteria. The latter is however provided as post-graduate training at the Bristol Veterinary School and is offered to all UK veterinarians in need of meeting the criteria.

5.39. Practical training in food hygiene and public health is delivered to 4th and 5th year students, with final year rotations provided in the School’s own slaughterhouse. The slaughterhouse is a small-scale facility, operated as a commercial food business. Students are taught and hands-on trained in the various steps of food producing including ante- and post-mortem meat inspection, meat cutting (small facility accompanying the slaughterhouse), as well as the different aspects of hygiene, quality systems and legislation. Students are grouped in small numbers, guided by the senior lecturer, a veterinarian with a huge amount of experience in meat inspection, and recently also by a VPH resident. The staff are highly experienced and dedicated to the teaching. Talking with fourth and fifth year students, VPH and the way that is it currently taught and trained is much appreciated.

5.40. In addition to this training in the slaughterhouse, students have access to relevant live preparations, freshly collected each week, as well as to a collection of historical preparations and photographs. In the slaughterhouse, all major animal species (including pigs) are present, except for poultry. Extramural instruction is currently not delivered.

Comments

5.41. Poultry slaughter is currently not covered in the practical training.

5.42. There are no external visits to other Food Business Operators.

Suggestions

5.43. The School should consider including supplementary extramural visits to high throughput abattoir facilities
in order to enable students to observe real processing speed and the need for rapid decision making by the OV.

Recommendations

5.44. None.
Essential competences at graduation – the RCVS Day One Competences

Students must be provided with clear learning objectives for each of the essential competences at graduation (day one skills).

Findings

5.45. Learning objectives are provided for all taught sessions in the School. The learning objectives for the units of the veterinary curriculum are detailed within the outcomes documentation provided by the University Education Support Unit (EU). These have been designed in order to comply with the Day One skills requirement for students.

5.46. Information regarding the achievement of essential competences is most commonly gleaned from the assessments (both practical and theoretical) undertaken by students on a regular basis. These data are then collated and compared to ensure that they align with the desired outcomes for each unit with the aim that, upon completion of the programme, all of the Day One competences are in place and can be readily demonstrated.

Comments

5.47. Discussions with students demonstrate that they are aware of the RCVS Day One competences from Year 1 and throughout the course.

5.48. The learning objectives of the course are mapped to the Day One competences using an Excel spreadsheet.

5.49. The School uses a variety of means of assessing outcomes to ensure the achievement of Day One competences, in particular the Directly Observed Procedural Skills (DOPS) completed in final year where the assessed areas are mapped to the competences which are being assessed.

5.50. The School has added additional questions to the Destination of Leavers from Higher Education survey which is sent to graduates by all universities to canvas opinions for graduates from the School regarding how well prepared they feel for practice.

5.51. Discussion with employers, external core rotation providers and EMS placement providers similarly reassured the Visitors of the development of appropriate clinical competence.

Suggestions

5.52. None.

Recommendations

5.53. Curriculum mapping software should be implemented as soon as is possible to allow interrogation of the curriculum to ensure topic coverage, outcome coverage and assistance in blueprinting examinations and assuring alignment of teaching and assessment.
The teaching and learning environment

The academic environment must be conducive to learning of the students and the didactic and pedagogic development of the teaching staff (see also Stage two).

Findings

5.54. Teaching and Learning development provision has recently been reviewed by the University. A major revision of the previous Postgraduate Certificate offered by the University as part of the Teaching and Learning in Higher Education (TLHE) programme will be launched in Autumn 2014; the Cultivating Research and Teaching Excellence (CREATE) CPD Scheme.

5.55. The CREATE scheme provides a framework for academic and professional services staff who are involved in teaching and supporting student learning to gain recognition across the breadth of their roles and at different stages of their careers. The scheme will be accredited by the Higher Education Academy (HEA) against the UK Professional Standards Framework (UKPSF) across all four descriptor levels.

5.56. A series of teaching and learning workshops (the Langford Teaching and Learning series) have been developed and delivered to address the need for context-specific training for staff involved in teaching on the BVSc and other SVS programmes and courses. These workshops are also run twice a year for new staff and post-graduate scholars and some have been included within the University’s new HEA accredited CREATE structure. Additionally, a modified version of the programme has been offered to both external core rotation teachers and EMS providers.

5.57. The University has a number of schemes for recognising and rewarding excellence in teaching and the support of the student experience. The ‘Golden Apple’ annual awards were first introduced in 2013 to recognise and reward members of staff who have made an outstanding contribution to teaching, the provision of support for students and education more generally. A number are student-led and a number are staff-led. In both 2013 and 2014 an SVS academic won the FMVS Faculty prize (there is only one) and in 2014 a veterinarian in CCCA won the only Faculty student-led prize.

5.58. At a local level, the School of Veterinary Sciences sponsors three awards; one for excellence in teaching, one for excellence in technical support and one to a member of staff whose academic achievements have been exceptional in a given year. In addition, LVS award two prizes; one to a member of clinical staff and one to a member of support staff working within the LVS clinics. Prizes are presented during the School graduation ceremonies.

5.59. In the new curriculum there are usually no more than three lectures per day, complemented by timetabled Directed Self Education (DSE) and Directed Group-based learning opportunities. There are many examples of use of newer approaches: teaching materials are delivered through Blackboard™ as the VLE, providing accessibility and standardisation of quality across the programme; DSE has been adopted across all years of the programme and additional or more effective and authentic learning opportunities have been included, with the development of re-useable computer assisted learning where appropriate. Assessment of learning has also evolved, using e-assessment (delivered through Questionmark Perception™ in many areas) to enhance the quality of the assessment process, whilst still ensuring alignment with the taught curriculum.
5.60. Investment in the development of the Clinical Skills Laboratory has provided the structure to allow teaching and evaluation of practical skills as part of the outcomes based philosophy that underpins the new curriculum. On-going technology enhanced learning developments include increased adoption of audience response technology (TurningPoint) with all students issued with their own handsets, and the use of podcasting and lecture capture initiatives for which the School is part of the pilot being undertaken across the University in 2014-15.

Comments

5.61. There are excellent facilities in Southwell Street and within the Faculty, particularly the new Life Sciences building for teaching basic sciences. These are fit for purpose and of a very high quality (see also Chapter 6 – Facilities and equipment).

5.62. There is very good use of Turning Point technology for formative and in class assessments. Students are aware that this can also be used to record attendance.

5.63. The Clinical Skills Laboratory at Langford is well-equipped, well laid out and fit for purpose which includes running the OSCE examinations. It is very much a “live” facility with new teaching aids being added all the time.

5.64. There is significant attention paid to teaching skills development and monitoring for staff. This forms part of the discussions which take place at annual performance reviews ensuring that attention to teaching quality is embedded in the culture of the School.

5.65. There has been some clever use of DSE within the curriculum given the absence of sufficient small group teaching rooms. These are generally done in groups; there were some negative comments from students about how difficult it could be to get together as a group, but no issues regarding finding suitable space or resources to complete the tasks. The use of contribution forms ensures equitable involvement by the whole group. There were some requests for more individual assignments driven by a desire to be seen to excel individually.

Suggestions

5.66. None.

Recommendations

5.67. None.
Monitoring and assessment of students

Student performance must be assessed regularly.

Written, project and practical work, generic competences such as professional attitudes, communication skills, problem-solving abilities must all be evaluated with equal emphasis to practical and clinical skills. Evidence must be produced that students meet the Day One Competences.

Evaluation methods must be known and understood by the students.

Whenever possible, the use of external examiners/observers should be made.

Results of assessment must be documented properly.

Findings

5.68. The University assessment strategy is part of the combined Education Strategy for 2010-16 that is approved through Senate and is the responsibility of the University’s Education Committee. The examination policy, as informed by that strategy, defines the Rules for Assessment, Progression and the Award of a Qualification as part of the Regulations and code of practice for taught programmes.

5.69. All those teaching on the BVSc programme uphold the University’s Exam Regulations. Any changes to Unit examination procedures must be approved through the External Examiner, the VPC and the Faculty Undergraduate Study Committee. Examination regulations are included in all student handbooks.

5.70. Within the BVSc programme, a wide range of examination types are used, including written papers, single best response MCQs, DOPS, OSCE (including practical animal handling, clinical skills and communication skills) and the use of more innovative forms such as video capture of task performance and evaluation of self-reflection. A summary of these is available in the BVSc Assessment Matrix.

5.71. The primary drivers for each form of assessment are now validity (in all its aspects) including reliability. The adoption of more resource effective formats of delivery in some areas (e.g. Blackboard and QuestionMark Perception™) allows a refocusing of staff effort towards assurance of quality rather than administration of delivery. This process is on-going. In other areas the School recognises that resource intensive formats (OSCE, multi-source feedback) are essential for validity and will ensure that there is resource to support effective delivery of these formats. Formative assessment occurs throughout the programme and adoption of e-assessment and greater use of the VLE aims to make this feedback more timely and effective.

5.72. A Code of Practice for External Examining of Taught Programmes at the University of Bristol was approved in 2102. The School aligns with the code as far as is possible for a professional veterinary undergraduate programme in the UK.

5.73. Each Unit of the programme has an External Examiner who is responsible for overseeing student course work, examination questions, scripts and all other aspects of work that contributes to the summative unit mark. All External Examiners are invited to attend unit meetings, with several also attending the Board of Examiners. Annual and final reports from External Examiners are reviewed as part of the Annual
Programme Review (APR) and action taken as appropriate. The outcomes of that review are included in the formal response to the External Examiner. Through the APR committee all reports and responses are shared with the Senior External Examiner for the programme, Heads of Teaching, Head of Student Experience, Head of School and Faculty Undergraduate Studies Committee.

Comments

5.74. All the major objectives associated with the monitoring and assessment of students are being achieved.

5.75. The School uses an excellent and appropriate mix of assessment methods as evidenced by the assessment matrix, including OSCEs to assess practical skills and DOPS in clinics.

5.76. Good use is made of formative assessments throughout the course; some students commented that the formative assessments did not always accurately reflect the summative assessments in terms of their difficulty.

5.77. Appropriate processes have recently been developed for ensuring timely responses to external examiners’ comments.

5.78. The processes associated with the writing, sense-checking and standard-setting of examination questions, compiling and blue-printing of examination papers and post-hoc examination review gave the Visitors confidence in the School’s assessment procedures.

5.79 Review of the reports by the External Examiners suggests that in each of the subject areas the standards expected by external examiners are being met. There are frequent comments from External Examiners about poor administrative support for the process of examination review, but this is being addressed with clear timelines to be adhered to in the future.

5.80. The core rotations assessment documentation available to students is complete and provides excellent guidance for the students.

Suggestions

5.81. Monitor adherence to newly-established timelines for ensuring prompt and timely release of examination papers to external examiners.

Recommendations

5.82. None.
Monitoring and assessment of teachers and instruction

A system must be available to allow students to evaluate teacher performance and teaching.

Students must be able to participate in the development of the curriculum in general.

Findings

5.83. Timely and adequate student feedback is considered essential for the monitoring and assurance of the Programme. Student attitudes to the content, delivery and overall satisfaction with the programme, are used alongside engagement with external evaluators and examiners, the FQET teams and the School’s Teaching and Learning Adviser to inform a process of review and improvement. The feedback from students is collected in various ways at unit level and in a format that is most appropriate for the unit (paper, online questionnaires, focus groups etc.). Response rates are variable and the School is striving to better engage students with the feedback. One strategy has been to improve the timeliness and accessibility to the outcomes of their feedback by use of the VLE, this demonstrating the value of their efforts.

5.84. Data are reviewed at VPC with that obtained through the Student Course Representatives (who sit on VPC) and from the Staff Student Liaison Committee (SSLC), chaired by the Head of Student Experience that meets once or twice per term.

5.85. The identification of year administrators for 2013/14 has helped with the clarity of administrative responsibility that improves response time. In this capacity, the SAO may act as the portal for urgent/important issues relating to teaching and assessment. There are a series of Standard Operating Procedures in place as to how to escalate issues and to whom. These cover examination, organisational and academic queries as well as student complaints. The Student Administration Manager (SAM) also sits on VPC and therefore contributes information relating to student issues and feedback relating teaching and teachers that have been channelled through the SAO.

5.86. Students also play a significant role in both the periodic review of schools across the Faculty as well as the Faculty quality enhancement process (FQET). In this latter capacity, students undertaking their studies in a different School are part of the team undertaking the review and volunteer students from the School are part of the panel under inspection.

5.87. The Head of Teaching deals with immediate urgent issues. Any required change to teaching delivery, content or assessment is approved by the VPC before implementation and referred to the Faculty Education Director as necessary. Issues relating to teaching or the learning experience which are raised at the Staff-Student Liaison Committee will then be brought to VPC.

5.88. Feedback from students relating to the individual unit is collated by the Unit Organiser, discussed in the unit meetings, that include all those responsible for delivery of the unit including technical staff, and presented at the Annual Programme Review as well as a proposed response and changes to content needed. Issues relating to the management of teaching delivery are referred to Head of Teaching. Student course representatives sit on VPC and are able to feedback outcomes directly to their peers. All available
student feedback is discussed in the APR meeting at the end of the teaching year.

5.89. The School has adopted a ‘you said we did’ approach to providing feedback to the students which is delivered through the VLE in such a way as to be accessible. As far as possible the School attempts to make this response timely and accessible.

Comments

5.90. All the major objectives associated with the monitoring and assessment of teachers and instruction are being achieved.

5.91. While there has been the introduction of peer observation of teaching, the results of which forms part of the activity and performance review of staff, the Visitors did not identify any formal student evaluation of teaching.

5.92. Currently poor teaching is addressed with the individual member of staff by the Head of School and deputy Head of School.

Suggestions

5.93. The School is encouraged to strengthen processes for student evaluation of teaching and make discussion of the results a part of the annual performance review for staff. However, it was noted that, in other contexts, the collection and action on student feedback is currently extensive and care will be needed not to induce ‘feedback fatigue’ within the student body by asking for too much feedback too frequently.

Recommendations

5.94. None.
**Student welfare**

Adequate measures should be taken to minimize the risk of zoonotic diseases as much as possible (e.g. vaccination against rabies).

The establishment must provide or have a right of access to a system of routine and special guidance for students, especially those with social problems or those having difficulties with their studies.

The guidance programme should also cover future career development and/or job selection.

**Findings**

5.95. The Student Administration Office (SAO) acts as a day-to-day point of contact for supporting students. The identification of year administrators from 2013/14 has helped with the clarity of administrative responsibility that improves response time. In this capacity, the SAO may act as the portal for urgent/important issues relating to teaching and assessment. There are a series of Standard Operating Procedures in place as to how to escalate issues and to whom. These cover examination, organisational and academic queries as well as student complaints. The Student Administration Manager (SAM) also sits on VPC and therefore contributes information relating to student issues and feedback relating teaching and teachers that have been channelled through the SAO.

5.96 Upon arrival at the University, students are required to make known to the School Disability Coordinator (Dr Séverine Tasker) conditions such as disabilities, allergies, etc. This will enable the student and the University to discuss and agree appropriate health and safety procedures. Students are encouraged to inform their supervisor or tutor of any circumstances or conditions that may affect their health and safety. In addition to this regular risk assessments are undertaken by the Departmental Safety Adviser (DSA), to ensure that any physical threats are minimized.

5.97. It is a requirement that all BVSc students are tuberculosis and tetanus vaccinated. The information for the screening will be gleaned from the pre-course health questionnaire filled out by each student, which provides vital information confirmed by a GP on the student’s current immunisation status. Veterinary science students will then be called for an appointment for a tuberculosis vaccination during their first year if not already vaccinated. Failure to comply with health screening vaccination requirements will result in exclusion from core components of the taught course on health and safety grounds and a resultant failure to complete the course.

5.98. The most important biosecurity measures in regards to zoonoses are:

- Ensuring that methods of working are designed to minimise the movements of people, vehicles or equipment into areas where farm animals are kept. This includes fields, sheds, markets or other holding areas.

- When students have contact with farm animals then they are required to follow best practice and cleanse and disinfect protective clothing, footwear, equipment, vehicles etc. before and after the contact with the animals. Disposable protective clothing may also be used.

- Students and staff are required to make proper use of any control measures provided, e.g. ventilation,
safety cabinets, etc. as well as any personal protective equipment provided.

- Reporting of any symptoms of illness by the individual student as soon as possible to the Pre-clinical or Clinical Dean in the first instance, who will then inform the DSA.

5.99. The University’s Accommodation Office guarantees rooms in Halls of Residence or Student Houses for all first year students, other than those normally resident in local Bristol or Bath postcode areas. They also help students with privately rented accommodation in Bristol in subsequent years. During the later years of study, while students spend the majority of their time at Langford, students usually arrange their own rented accommodation in surrounding villages, although hostel rooms are available on site if required. These rooms are also made available to those students undertaking time ‘on call’ during their studies.

5.100. Students in Bristol (Years 1-3) have access to the full range of University social, sports and recreational facilities, many of which are provided by the Students’ Union. Membership of the Union continues for students at Langford although transport back to the centre is a recognised problem. Student recreational provision at Langford has improved dramatically in recent years with the renovation of the Langford Gym and the Student Barn study and relaxation space. In addition, the Centaur Student Society organises social and sporting events and there is a student common room, a bar, a snooker room, squash and tennis courts and a cricket/football pitch. The Langford Trust has also proved to be highly adept at organising greater student involvement with various events, both locally and further afield.

5.101. Teaching in Bristol occurs mainly in the School of Medical Sciences or the Pre-clinical Veterinary Science Building in Southwell Street; both sites provide a student common room and a rest area with food and drinks machines. The former also has a dedicated canteen. The Langford site houses a newly renovated student common room, including several drinks machines and a cold water fountain, a quiet study space and several small group work rooms within the building referred to as the Student Barn. Additionally the site hosts a canteen that provides hot and cold food for the majority of the students’ working day.

5.102. The University provides a wide range of support for students with problems (social problems, study problems, careers development, job selection) including:

- Counselling
- A Multifaith Chaplaincy
- Students’ Health Services
- Financial Advice
- International
- Careers
- Disability services
- Vulnerable Student Support

5.103. Each BVSc student is allocated a Personal Tutor within the School; the scheme is run according to University guidelines and is coordinated through the Pre-Clinical Dean for years 1-2 and the Clinical Dean for years 3-5 with the oversight of the School Senior Tutor (SST) Dr Rose Grogono-Thomas. The SST is responsible for the training and support of personal tutors within the School and is the School’s single point of contract for the Faculty and University. As an MRCVS the SST is also the single point of
contact for external accreditors such as RCVS. The SST sits on the University’s Senior Tutor Group and is responsible for organising and presenting student feedback on the personal tutor system to the School’s Annual Programme Review (APR). The SST, Pre-clinical and Clinical Dean sit on the School’s extenuating circumstances committees.

5.104. The Personal Tutors are members of academic staff based in Bristol for students in the first two years of the programme. From the third year, when students embark upon clinical studies and spend a greater proportion of their time on the Langford site, this responsibility transfers to members of staff based at Langford. Personal Tutors receive their tutees’ academic assessment results, EMS reports and professional studies portfolios and are therefore able to provide support on both personal and academic matters. The Pre-Clinical Dean has an office in Bristol and works closely with the SAO at Langford, thus ensuring good communications with the Clinical Dean and enabling them to have an overview of student academic progress and pastoral support.

5.105. Unit Organisers provide a support network for students experiencing academic problems. The EMS Coordinator and the SAO at Langford provide guidance and support for students whilst on pre-clinical and clinical placements.

Comments

5.106. All the major objectives associated with student welfare are being achieved.

5.107. Throughout the University of Bristol, SVS and Students’ Union, student support systems are easily identifiable and readily accessible with appropriate processes in place to cover a wide range of potential issues where students may require support.

5.108. Discussions with students suggest they are very familiar with the support systems available to them. Feedback on the Year 1 and Year 2 tutors and the Pre-clinical Dean was very positive. There was more variability in tutor availability and also in the students’ awareness of the support systems available reported by the students in Years 3-5.

5.109. Tutor training is not currently compulsory.

5.110. The tutor change at Year 3 is not perceived to be a problem by the students, although many mentioned how good their relationship was with their pre-clinical tutor.

5.111. The students were all very positive about the Vet Family system, Vet Soc and Student’s Union welfare support and the extent of peer support available. Indeed there seems to be very good integration between years which is impressive given that the students are working across two campuses.

5.112. The centralisation of student support and course administration and the identification of year administrators has helped with the clarity of administrative responsibility and increases the likelihood of identifying struggling students.

5.113. The social spaces available to the students at Langford and in Bristol are well-used, very pleasant and well maintained. Students were positive about the facilities and very appreciative.

5.114. The establishment of a Head of Student Experience provides a useful focus for maintenance of processes and procedures which relate to student welfare.
Suggestions

5.115 Consideration could be given to making tutor training compulsory to improve consistency within the student support process.

Recommendations

5.116 None.
Chapter 6 – Facilities and equipment

The site, buildings and its equipment should be conducive to teaching and adequate for the number of students enrolled.

Buildings, for both basic and specialist facilities must be adequate and suited to the teaching programme.

Health and safety standards must be conscientiously observed, as should the requirements of acceptable laboratory practice.

The practical side of animal production must be taught on the institution’s own farms or on farms to which it has access, to sufficiently small groups of students, thereby allowing hands-on experience for all.

Adequate and hygienic facilities for the humane treatment of animals must be available, including provisions for hospitalisation, for operative surgery and recovery from anaesthesia, for exercise and the isolation of infectious cases.

The clinical and hospital buildings must be up-to-date, clean and well maintained, and should be at least as adequate as those available in the private sector in the individual states.

The diagnostic, medical and surgical equipment provided must promote state-of-the-art practice of veterinary medicine and surgery.

Institutions must have a mobile/ambulatory clinic for farm animals or equivalent facilities so that students can practice field veterinary medicine under expert supervision.

Where practical training involves the use by the institution of material obtained from slaughterhouses and unfit for human consumption, vehicles and facilities must be properly adapted, maintained and operated to ensure the safety of students and staff and to prevent the spread of infectious agents.

Findings

6.1. Premises in Bristol – The Pre-Clinical Veterinary Science Building is situated on Southwell Street and includes:

- Two lecture theatres
- Seminar rooms
- Computer suites
- The museum
- The veterinary dissection room
- The ‘Live Anatomy barn’
- Clinical skills lab
6.2. Teaching also takes place in the School of Medical Sciences (teaching laboratories) and some in the School of Biological Sciences (parasitology) located at 31-37 St. Michael’s Hill, and the AIMS CETL (Applied and Integrated Medical Sciences Centre of Excellence in Teaching and Learning) are used for some tutorials.

6.3. Premises at Langford – The School of Veterinary Science (SVS) is located approximately 14 miles southwest of the centre of Bristol in the village of Langford. The Langford campus occupies the grounds of the original Langford House estate and all the clinical services (see below), as well as other academic facilities, are located on this site. Facilities include;

- Two principle lecture theatres, the Hodgkin Lecture Theatre (HLT) and the Churchill Building Lecture Theatre (CBLT)
- Seminar/small group teaching rooms
- Teaching laboratory
- Clinical skills laboratory
- Computer rooms
- Library
- Small Animal Hospital (SAH)
- Small Animal Practice (SAP)
- Equine Centre
- Farm Animal Practice
- Post-mortem room, pathology wet lab and incinerator
- Abattoir
- Research laboratories
- Recreational areas (student “barn”, canteen, bar, gym, squash and tennis courts)
- Student hostels
- Administrative offices
- Animal Welfare and Behaviour Research Building

There is an adjacent livestock farm (Wyndhurst Farm) on the opposite (South) side of Langford Road with a dairy herd and sheep flock.

6.4. Premises at Cannington – The facilities at the Cannington Centre of Bridgwater College are used for teaching handling and husbandry of a range of species including horses, exotics and pigs. Cannington is approximately 25 miles southwest of Langford and students are taken to the Cannington Centre by bus.
6.5. Clinical services are run by Langford Veterinary Services (LVS). Small animal, equine and farm animal work are largely located in separate areas, although they also share some cross species services and their associated facilities such as imaging, anaesthesia, pathology and laboratories.

6.6. The Small Animal Practice (SAP) is a first-opinion practice serving the local community. It is sited in a purpose-built facility (the Mendip Building – 2006) comprising 5 consulting rooms plus one larger room which is used for teaching, behaviour consultations and ‘puppy parties’. The SAP has its own anaesthetic induction room, operating theatre, minor procedures room and dog, cat, rabbit and exotics wards immediately behind the consulting suite. Adjacent to the SAP is the Dog Hydrotherapy unit, with spa, water-walker and swimming pool.

6.7. The Small Animal Hospital houses the main reception area, 7 consulting rooms together with the pharmacy, two procedures rooms, a physiotherapy room and a dog ward. Upstairs is the feline area comprising a waiting room, two consulting rooms, a procedures room and a cat ward. The immediately adjacent new small animal surgery building was a £7m investment opened in 2012. This houses 5 small animal operating theatres, 4 anaesthetic induction bays, an anaesthetic recovery room and a new ICU including an enclosed ‘pod’ for cats. New imaging facilities are also provided in this building comprising two ultrasound rooms, a radiography room, a CT room (on two levels making it accessible both for small animal cases and standing horses) and a radiology viewing room. MRI for small animals is provided by a permanently stationed mobile unit, sited immediately adjacent to the small animal hospital.

6.8. The original surgery building now houses the dog surgery ward, the day ward, two small procedures rooms and storage, laundry and sterilization facilities for surgery. There is a second (overspill) radiography room, a student computer room and teaching rooms for imaging and ophthalmology. This building also houses the new Clinical Skills Laboratory, opened in 2013 and situated in what was the large animal theatre. Small animal isolation facilities are separate from the main hospital in a wing of the Pearson Building with their own separate entrance.

6.9. The Equine Diagnostic Centre (EDC) contains three procedure rooms (one of which has stocks) for clinical examination, endoscopy, ultrasound and standing dental treatment, two stable courts, a treadmill building and a radiography room with adjacent area and offices.

6.10. The new Equine Surgical Facility (The Alborada Building) is a £3m project opened in 2012, that houses two operating theatres, one standing surgery room, three induction/recovery boxes and a large area for patient preparation prior to entering theatre.

Comments

6.11. The facilities at both campuses are of varying vintage and reflect the time at which they were built. The new facilities such as the Wyndhurst Farm dairy and the new small animal and equine surgical facilities are state of the art. Other buildings, while older, all appeared adequate for clinical functioning and for teaching. Many had been renovated and the Langford campus had a tidy and functional appearance.

6.12. Some contraventions of stated policy were noted, such as eating in areas in the small animal hospital despite clearly visible notices that food and drink should not be consumed; the wearing of scrubs in
designated eating areas and both staff and students wearing clothing with below-elbow sleeves in clinics.

6.13. A spot check of ambulatory vehicles revealed a number of shortcomings, some of which would pose risks to safety or biosecurity.

6.14. Although veterinary course teaching within the new Life Sciences Building teaching laboratory will be limited, it is a modern and well equipped facility for delivery of basic science teaching to the whole year group.

Commendations

6.15. The Live Anatomy Barn and the Clinical Skills Laboratory at Langford are to be commended for their innovation and ready accessibility for students.

Suggestions

6.16. None.

Recommendations

6.17. Adherence to biosecurity protocols in the small animal hospital and ambulatory vehicles must be enforced for staff and students.

6.18. A barrier must be fitted to the ambulatory van to ensure that luggage cannot enter the passenger compartment in the event of sudden deceleration.
Chapter 7 – Animals and teaching material of animal origin

The farm/s where veterinary field training is performed should contain the major animal species relevant to veterinary practice in the individual state. Farm facilities and equipment should be up-to-date, and at least as good as those available in the private sector of the countries concerned. The farm should be a model of animal welfare for the profession and the students.

Adequate clinical material including all of the major species relevant to veterinary practice in the state concerned must be made available to the students.

The clinical material should be varied, providing experience in routine and complex cases.

The clinical services must have access to appropriate diagnostic support.

Clinical and hospital facilities should operate day and night for most of the year, i.e. like a normal practice.

The clinical department(s) must maintain close links with the pathology and other diagnostic services so that students can follow cases where animals die of natural causes or are euthanized, and conduct post-mortem examinations. If necessary, pathology material should also be obtained from outside the institution to enhance the learning experience.

An adequate data retrieval system must be available so that case studies can be undertaken.

The Faculty must ensure that the students are exposed to an adequate supply of teaching material in the veterinary public health (including food hygiene) areas.

Findings

Anatomy

7.1. Thirty to forty dog cadavers are used each year and these are obtained from the local Bristol Dogs Home. The animals are received dead and are embalmed on-site. Cadavers are stored in large tanks in a 2% solution of formalin prior to being used and are rinsed in cold water for at least 24 hours before the students use them.

7.2. Ponies, goats/sheep and calves are sourced from auctions/local suppliers and are euthanized on-site prior to embalming. These cadavers are stored in a +4 degree cold room.

7.3. Thirty rabbits are collected throughout the year and embalmed and stored in tanks as above.

7.4. All of the embalmed cadavers are used maximally on all topographic courses e.g. when the limb is removed to access the thoracic region, it is tanked and used later on, during the locomotor practicals.

7.5. Thirty chickens and thirty fish are bought in for one practical session and dissected fresh.

7.6. Approximately 3 pigs sourced from a local supplier are dissected fresh.
7.7. Rodents/guinea pigs are dissected fresh.

7.8. A large amount of isolated fresh viscera are obtained from a local abattoir; e.g. large animal digestive tracts, kidneys and livers are used.

7.9. Bristol has approximately 300 stored pro-dissections, which are used repeatedly over the years. These are all catalogued with individual reference numbers. They also have approximately 500 specimens in pots, which are all catalogued and mostly digitised.

7.10. In addition to the cadaver material, live animals are used regularly in anatomy teaching.

7.11. An ultrasound scanner has recently been obtained and will be used from 2014 throughout live anatomy sessions.

7.12. Bristol uses a variety of computer assisted learning tutorials throughout their teaching in addition to eBiolabs pre and post practical quizzes.

Pathology

7.13. For the academic year 2013/2014, the AHVLA (now the AHPA) operated a farm animal surveillance post mortem service out of University facilities. This gave the students access to necropsy material provided as a result of this service and such material was used for rotation teaching under the supervision of the University pathologists. As of September 1st 2014 the University was awarded the contract with AHVLA (now the APHA) for providing a surveillance farm animal post mortem service, for a geographical area extending to a 1 hour drive from Langford, as part of the new APHA surveillance network structure. From 1st September 2104 the School has operated a commercial farm animal post mortem service, administered by Langford Veterinary Services (LVS), and lead by a newly appointed academic pathologist (ex AHVLA) dedicated to that role and employed in addition to the existing team of pathologists. The surveillance work represents a proportion of the throughput of this new service. Projected numbers of animals through the combined service (commercial and surveillance) are expected to equal or exceed those seen in 2013/14 and this has been supported by early analysis of throughput. On that basis the number of farm animal necropsies available for teaching is expected to result in a denominator (R18 table 7.g) that is within or better than, the recommended range.

7.14. The total of 797 necropsy cases in 2013/14 includes 203 cases of formal necropsy submissions to the University from external practices or LVS, 492 submissions to the AHVLA (now AHPA) laboratory (including 273 ruminants, 20 pigs, 36 poultry, 81 other animals and 82 foetuses) and 102 pigs specifically sourced for final year student necropsies. The number of necropsy cases submitted to the University pathologists has increased from 2011-12, although submissions to the AHVLA lab fell in 2013/14 having risen sharply over the previous 2-3 years. The reasons for this are unclear, but may in part be due to the emergence of the Schmallenberg virus infection in 2011-12. The School already sources pigs specifically for teaching necropsies and since 2010 every rotation student undertakes an individual supervised necropsy examination, usually of a pig or calf.

7.15. In addition to the animals listed in table 7.b, below, the School provides bovine reproductive tracts obtained from the local abattoir, for reproduction teaching. During the fourth year of the course, students undertake small group (10 per session or less) sessions in the ‘wet laboratory’, during which fresh specimens
obtained from the local abattoir are examined under the guidance of one of the academic pathologists.

**Animal production**

7.16. On the site of the institution, the University’s Wyndhurst Farm is approximately 100 Ha with a 190-200 cow high yielding Holstein-Friesian dairy herd with an average yield approaching 9,500 litres / cow / year. The farm also has approximately 150 replacement dairy young stock at any given time. Phase 2 of the Wyndhurst Farm capital project was completed in December 2012, offering improved, safe access for students to cattle for teaching. A 100 breeding ewe flock of New Zealand Romney sheep is also kept for teaching purposes. Surplus lambs are slaughtered through the School’s own abattoir and marketed through the University caterers, allowing everything from ‘conception to consumption’ to be studied by the students.

7.17. On other sites to which the institution has access, students undertaking the Farm Animal Track rotation also attend a week at either one of two external veterinary practices (Shepton Veterinary Group and Delaware Veterinary Group) with whom the University has a contractualised collaborative agreement in place. Each practice has over 100 dairy clients, some of which are milking over 1000 cows, approximately 60 beef herds and a number of small ruminant and pig holdings. In addition, students (as part of their animal management practical teaching) travel to the Cannington site of Bridgwater College, to study healthy specimens of species that are not keep on site in sufficient number including horses, pigs and exotics.

**Food hygiene/Public health**

7.18. The University of Bristol has its own multi-species red-meat abattoir on the Langford site (approved food business no 8037). The abattoir is operated as a commercial entity, catering for the slaughter of cattle, sheep and pigs for local farmers, smallholders, hobby farmers and butchers. In 2013 it processed 530 cattle, 2763 sheep and 2959 pigs. During the one week 5th year Veterinary Public Health rotation, the students spend time in the abattoir, during which attention is specifically given to methodologies of slaughter, dressing procedures and risk assessments in relation to Food Hygiene and Microbiology, ante- and post mortem inspection, relevant pathology and animal welfare. Didactic teaching on these subjects uses examples from the abattoir. Sample material collected from other abattoirs in the region is also used for the 5th year teaching. Where possible, aspects of meat processing are covered. As of 2013-2014, there is also VPH teaching in Year 1 including two sessions as part of anatomy practical activities. In these sessions abattoir samples are also used to demonstrate slaughter animal pathology to the students.

**Consultation**

7.19. Langford Veterinary Services (LVS) clinics are open throughout the year.

- The Small Animal Practice is open Monday to Friday 08.30 to 18.00 (19.00 on Thursday) and on Saturday 09.00 to 12.00, and operates a 30-minute appointment system.

- The Small Animal Referral Hospital Reception is open Monday to Friday 08.00 to 19.00 and 09.00 to 13.00 Saturday and Sunday and routine appointments are scheduled Monday to Friday during these hours.
• The **Equine First-Opinion and Referral Hospital Reception** is open from 08.30 to 17.30 Monday to Friday and routine appointments are scheduled in these hours.

• The **Farm Animal Practice** is open from 09.00 to 17.00 Monday to Friday and routine appointments are scheduled in these hours.

**Patient flow**

7.20. The term “consultation” refers to those patients that come in and go out during daily consultation hours. “Hospitalisation” refers to those patients that are retained in the clinic as “in patients” following presentation (see table 7.c. below).

**Vehicles for animal transport**

7.21. Both the ambulatory practices have an assortment of vehicles that are used to undertake home visits and can be used to transport small animals back to the surgeries if necessary. LVS owns 6 vehicles altogether. Equine and farm animals are always transported by the clients (or their agent), rather than by members of staff.

**On-call emergency service**

7.22. All of Bristol’s clinics run their own out of hours emergency services. In addition LVS runs a small animal first opinion emergency service for several local practices as well as for their own first opinion practice when the SAP is closed. All services within SAH and the Equine Hospital provide an emergency service for referring vets. These cases are seen by the SCTSSs initially with the backup of senior clinicians at all times. The full facilities of the Hospitals are available for these cases as part of the 24/7 coverage for clients. The SAH has both nursing and veterinary staff within the Hospital to care for patients at all times of the day and night including weekends and bank holidays. The Equine Hospital has staff on site at all times and when appropriate the veterinary and nursing staff will be managing those patients at all times.

**On-farm teaching and outside patient care**

**Ambulatory (Mobile) clinic**

7.23. The Ambulatory (Mobile) Clinic is defined as a unit which provides on-call outside services to farms and other institutions and is generally operated on a commercial basis. Both equine and farm ambulatory practices provide a service 24/7. A vet from the equine practice provides out of hours cover for the practice. A vet from the farm animal practice provides cover for the farm practice. The phone for both these services is taken by a specialist out of hours provider (Kernow) who then directly contact the appropriate vet on duty for that service. Students are involved in all aspects of the ambulatory services.

7.24. The equine mobile clinic has one Skoda estate car (5 people) and one Mitsusbishi 4WD (5 seats). The farm animal mobile clinic has two, 4WD vehicles (5 seats each), a Skoda estate (5 seats) and a van (2 seats).

7.25. Table 7.d. below shows the approximate number of sick animals seen by the ambulatory clinic per year during the past three years. On average the farm animal ambulatory clinic conducts approximately 2,300 visits to local farms spread across a client list of some 234 unique locations. The equine ambulatory clinic conducts approximately 2,200 visits to clients annually.
Other on-farm services and outside teaching

7.26. The School uses a limited semi-dispersed model to allow for outside teaching in two areas: farm animal elective teaching and first opinion companion animal charity work. To this extent, the University has contractual arrangements with the Shepton Veterinary Group (Shepton Mallet, Somerset), Delaware Veterinary Group (Castle Cary, Somerset), the RSPCA Greater Manchester Animal Hospital and the PDSA Pet Aid Hospital in Bristol. The practices and respective charities are remunerated for this provision. Up until 2013/14 all students attended Shepton and Delaware practices as part of the final year rotations. For 2013/14, only those students on Farm Animal Track rotations attend those practices. While at the RSPCA the students are likely to triage/operate on 6000 dogs, cats, ferrets and rabbits each year. Approximately 60% cat, 20% dog, 15% rabbit and 5% ferret, (see table 7.e.)

7.27. All the LVS clinics run as ‘normal’ practices and offer the same services one would expect to their level. All clinics are members of the RCVS Practice Standards Scheme – The Small Animal Hospital and Equine Hospital are RCVS Accredited Hospitals and the first opinion practices have RCVS Accredited General Practice Status. All of these provide 24/7 care for Hospital’s clients. The specialist services are also provided out of hours.

7.28. The level of clinical service delivered by the farm animal and equine practices is equivalent to that of outside practice. Bristol has access (through other disciplines) to facilities/equipment and expertise and it retains a loyal and expanding client base within the clinics.

7.29. An overview of the main indicators of the European System of Evaluation of Veterinary Training is shown in Appendix 1.

Table 7.a: Material used in practical anatomical training

<table>
<thead>
<tr>
<th>Material</th>
<th>Canine</th>
<th>Ruminant</th>
<th>Equine</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013/14</td>
<td>2012/13</td>
<td>2013/14</td>
<td>2013/14</td>
</tr>
<tr>
<td>Live animals1)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cadavers1)</td>
<td>32</td>
<td>39</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Specimen1)</td>
<td>115</td>
<td>115</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Other2) potted specimens and skeletons</td>
<td>160</td>
<td>75</td>
<td>65</td>
<td>135</td>
</tr>
<tr>
<td>Imaging e.g. ultrasound</td>
<td>See above</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer assisted</td>
<td>See above</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 7.b: Number of necropsies over the past 3 years

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of necropsies</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2012</td>
</tr>
<tr>
<td><strong>Food-producing animals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>167 (+43 foetal)</td>
<td>157</td>
</tr>
<tr>
<td>Small ruminants</td>
<td>110 (+31 foetal)</td>
<td>169</td>
</tr>
<tr>
<td>Pigs</td>
<td>122 (+5 foetal)</td>
<td>145</td>
</tr>
<tr>
<td>Other farm animals</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td><strong>Equine</strong></td>
<td>41</td>
<td>37</td>
</tr>
<tr>
<td>Poultry</td>
<td>36</td>
<td>82</td>
</tr>
<tr>
<td>Rabbits</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td><strong>Companion animals/exotic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>88</td>
<td>66</td>
</tr>
<tr>
<td>Cats</td>
<td>53</td>
<td>35</td>
</tr>
<tr>
<td>Other/exotic</td>
<td>87 (+3 foetal)</td>
<td>77</td>
</tr>
</tbody>
</table>

*year prior to visitation

### Table 7.c: Number of cases: i) received for consultation, and ii) hospitalised in the LVS clinics, in the past three years

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of cases in academic year</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td><strong>Food producing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bovine</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ovine, caprine</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Porcine</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (farm) **</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Poultry</strong></td>
<td>41</td>
<td>0</td>
</tr>
<tr>
<td><strong>Equine</strong></td>
<td>907</td>
<td>2140</td>
</tr>
<tr>
<td><strong>Companion animals/exotic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canine</td>
<td>9868</td>
<td>8859</td>
</tr>
<tr>
<td>Feline</td>
<td>2912</td>
<td>2787</td>
</tr>
<tr>
<td>Other**</td>
<td>58 Chelonian</td>
<td>6 chelonian</td>
</tr>
<tr>
<td>141 Birds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>122 Small mammal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Snakes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Wildlife</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 Lizard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*year prior to evaluation, **Indicate species
Table 7.d: Number of patients seen on outside teaching in the past three years

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of patients</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13/14*</td>
<td>12/13</td>
</tr>
<tr>
<td>Cattle</td>
<td>1616</td>
<td>1510</td>
</tr>
<tr>
<td>Small ruminants</td>
<td>571</td>
<td>340</td>
</tr>
<tr>
<td>Pigs</td>
<td>109</td>
<td>39</td>
</tr>
<tr>
<td>Other farm animals**</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poultry (no of flocks)</td>
<td>8</td>
<td>180</td>
</tr>
<tr>
<td>Rabbits (no production) units</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Equine</td>
<td>2197</td>
<td>2157</td>
</tr>
<tr>
<td>Other**</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

*year prior to visitation, **indicate species

Table 7.e: Number of patients seen on outside teaching in the past three years

<table>
<thead>
<tr>
<th>Species</th>
<th>Number of patients</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
<td>2012</td>
</tr>
<tr>
<td>Food-producing animals</td>
<td>250-300</td>
<td>N/AP</td>
</tr>
<tr>
<td>Small ruminants</td>
<td>10-20</td>
<td>N/AP</td>
</tr>
<tr>
<td>Pigs</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other farm animals**</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Equine</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>other</td>
<td>Dogs – 2764</td>
<td>160 – not specified</td>
</tr>
<tr>
<td></td>
<td>Cats – 2361</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rabbits – 188</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small Mammals – 98</td>
<td></td>
</tr>
</tbody>
</table>

*year prior to evaluation, **Indicate species

Comments

7.30. The access to animals is very broad and there are good numbers in all species except pigs and poultry. It is understood that in the clinical years this is largely down to geography and the nature of the operations, which require high biosecurity and use specialist poultry vets. While during the pre-clinical years there are pigs and poultry at Cannington and classes are taught there, the number of animals is very small and these are not at all representative of commercial units.

7.31. The facilities at Cannington are excellent for giving access to a wide range of species, both the more usual household pets and the more exotic ones.

7.32. The new dairy unit is of a very high standard and is an excellent and well-designed teaching facility as well as being a commercial farm giving a real insight for students. Biosecurity is strict and its importance
constantly emphasised.

7.33. The RSPCA clinic in Manchester and the PDSA in Bristol were highly valued by students and give very good access to hands-on first opinion practice, in a busy yet supported environment.

7.34. Although contracts were apparently agreed and appropriate for external teaching providers, not all of these were signed despite the services being delivered.

Suggestions

7.35. Consideration should be given to having more pigs available at Cannington, for example a group of farrowing sows, as well as trying to provide access to a small poultry flock for both animal handling and clinical experience.

7.36. Ensure that all contracts for external teaching provision are signed and up to date.

Recommendations

7.37. None.
Chapter 8 – Library and learning resources

The library and related services must help to meet the institution’s objectives and lend support to basic training, research and postgraduate studies.

To this end, the Library must offer a comprehensive and up-to-date range of books and journals. Its opening hours, regulations and loan arrangements must facilitate self-learning. The institution must provide an adequate number of places for private study in the library or elsewhere on the site. The Library must be professionally managed, have good working relationships with other libraries in the area, and provide modern on-line communication facilities for use by staff, students and researchers. In institutions where departmental libraries are available, the main library should have documentation on the material held in other libraries.

The Faculty must provide audio-visual and information technology facilities meeting the needs of the establishment.

Findings

8.1. The School of Veterinary Sciences is served by the University of Bristol Library, which offers a wide range of information resources and services, including:

- Many thousands of electronic books, journals and databases
- Over 1.4 million volumes of printed books and journals (via the Library Catalogue)
- Professional subject liaison and support
- Lending and reference facilities at ten branch libraries
- Inter-library lending and document supply services
- Formal arrangements for access to other university libraries (e.g. during vacations)

8.2. As well as extensive online resources, there are three library buildings serving the veterinary programme: the Veterinary Sciences Library at Langford; the main Medical Library in Bristol and the subsidiary Biological Sciences Library (Veterinary Parasitology), also in Bristol. Library provision is tailored to meet the needs of the Bristol Veterinary School, with the Medical Library in Bristol serving the units taught in years 1-3 of the BVSc, and the Veterinary Sciences Library in Langford serving all veterinary students, as well as the research and clinical communities at Langford.

8.3. Both libraries provide dedicated learning spaces for social, quiet and silent study; have PC rooms with high-speed internet links and lap-top loan services with Wi-Fi throughout the Library. The Veterinary Sciences Library is open 24/7 for members of the School; the Medical Library opening hours have recently been extended, and students may use any of the 10 University Libraries, as well as the Computer Centre in Bristol which offers 24/7 access to PCs. As part of its new 2014 strategic plan, the University Library is creating new and improved study spaces across the Bristol campus in response to rising student...
numbers, with, for example, the new Senate House Study Centre.

8.4. A refurbishment of the Veterinary Sciences Library took place in the summer of 2014 and reconfigured the use of space to create more study spaces; group study rooms; a larger PC Room with an additional 12 data points for students to use in conjunction with a laptop and power sockets for all study spaces reflecting a transition to a ‘digital first’ strategy for journals. Funding was also awarded in 2013 for creation of additional study spaces in the Medical Library, in recognition of rising student numbers.

8.5. There is a dedicated Subject Librarian for Veterinary Sciences (2 days per week) who has formal contact with the School via an Academic Library Representative nominated by the Head of School. Subject Librarians for the pre-clinical units are based in the Medical Sciences Library and work with Academic Library Representatives for the relevant Schools. The Academic Representatives and the Subject Librarians sit on the Medical Libraries Liaison Committee, which looks at Faculty-wide Library provision. The Veterinary Subject Librarian also reports to the Teaching Management Committee at Langford.

8.6. The libraries hold at least one copy of all the books on student reading lists and multiple copies of key textbooks, with a wide range of eBooks and books for reference. The University and Library managers allocate the budget for books on an annual basis.

8.7. The University subscribes to large, inter-disciplinary journal and databases packages from key publishers as well as individual veterinary journal titles; students have access to resources across the medical, life and clinical sciences. Two large veterinary journal backfiles, for Wiley and Elsevier titles, provide online access to older editions. An annual Serials Review Process provides ongoing review of subscriptions in light of changing needs, and in the past 4 years there have been new subscriptions to six essential veterinary-specific titles.

8.8. All students receive Library induction and training in the use of eJournals, databases and the Web to support literature reviews and searches for evidence. A number of online database training guides and library video tutorials are provided.

8.9. A brand new Life Sciences Building opened in 2014 after a £56.5 million investment. It provides a wide range of informal learning spaces, an atrium social space open to veterinary students to use at any time. The library is open until 9pm on weekdays during term-time and 6.30pm during vacations. It is also open at the weekends.
Main library: Medical (Years 1-3 of the BVSc)

| Is this specific to the veterinary training establishment? | No. |
| Is this common to two or more establishments? | Yes, it serves the Faculties of Medicine and Veterinary Sciences and the Faculty of Medicine and Dentistry. |
| Full time equivalents of part time employees | 5.65 in total: 2.6 Subject Librarians and 3.05 Public Services staff |
| Number of full-time employees | 2: Public Services staff |
| Number of journals received each year as hard copies | 1048 (university wide) |
| Numbers of full access electronic journals | 11792 (titles that are paid for university-wide) |
| Availability for online literature search | The Library subscribes to 126 databases and a range of electronic resources for Veterinary Sciences, including CAB Abstracts, Medline on ovidSP, Web of Science and Endnote. |
| Availability of textbooks | 1,418,941 |
| Number of student reading places | 388 (Medical Library) 3515 (across campus) |

Main library: Veterinary Sciences

| Is this specific to the veterinary training establishment? | Yes |
| Is this common to two or more establishments? | No |
| Full time equivalents of part time employees | 2 in total: 0.4 Subject Librarian and 1.6 Public Services staff |
| Number of full-time employees | 0 |
| Number of journals received each year as hard copies | 1048 (university wide) |
| Numbers of full access electronic journals | 11792 (titles that are paid for university-wide) |
| Availability for online literature search | The Library subscribes to a range of online databases and electronic resources for Veterinary Sciences, including CAB Abstracts, Medline on ovidSP, Web of Science and Endnote. |
| Availability of textbooks | Please see text above |
| Number of student reading places | 92 |

Comments

8.10. The library and related services fulfill the requirements. The restructuring of the medical and recently also the veterinary library concerning the study space, enlarged number of computers, the opening hours and the easy access to textbooks and e- journals present in both Bristol and Langford are really appreciated by the students.

8.11. There has been a large investment in information technology facilities including the implementation of
eBiolabs, TurningPoint and the virtual microscope. All have improved the teaching facilities and provide access to the study material during the whole academic year and beyond.

**Commendation**

8.12. The very enthusiastic library staff and their active involvement in library induction and training of the students in searching techniques and the use of eJournals, databases and the Web are of great value.

**Suggestions**

8.13. None.

**Recommendations**

Chapter 9 – Admission and enrolment

The veterinary course is a rigorous one, and students admitted must have proven capabilities.

Although admission and enrolment are the legal responsibility of the individual countries, the selection should be competitive, based upon academic achievements and on other criteria.

Admissions must also be compatible with facilities and staff numbers, bearing in mind the need for low student/staff ratios, particularly in the clinical side of the course, and the amount of clinical and pathological material available.

Findings

9.1. The minimum number of years (MNY) allowed to successfully complete the curriculum is 5 years.

Table 9.a: Undergraduate student composition in year prior to visitation

| Total number of undergraduate students | 559 |
| Total number of male students          | 115 |
| Total number of female students        | 444 |
| Foreign students                       |     |
| - from EU countries                    | 14  |
| - from non-EU countries                | 19  |

9.2. The School has a minimum A-level (or equivalent) academic requirement to ensure entrants have an equal knowledge base in Biology and Chemistry, and a minimum requirement for at least six grade A GCSEs including English Language, Mathematics and Physics. Various alternative qualifications are considered, including the IB Diploma, Cambridge Pre-U, Access to HE Diploma (Science or Medicine), BTEC extended level 3 diploma, SQASH, Welsh Baccalaureate, European Baccalaureate (EB) and graduate entry for holders of a relevant degree at 2i class or higher. International qualifications are assessed by specialists in the international office for equivalences to these qualifications. English Language qualifications may be required if English is not spoken as a first language.

9.3. In order to ensure fairness the University has a policy of supporting Widening Participation candidates, and making use of the in-house ‘Access to Bristol’ scheme alongside existing national initiatives. This process is overseen by the Strategic Admissions Committee.

9.4. Contextual offers - as part of its commitment to the UK national agenda on widening participation, the School considers the educational context in which grades have been achieved, particularly if there is evidence that the current or most recently attended school or college performs below a defined threshold. The University reviews its definition of educational disadvantage and low-performing schools each year and each case is considered on an individual basis. This will be further expanded by the introduction of the Gateway to the Profession programmes in 2016.

The number of contextual offers given in 2014 was 17 out of 151 applicants from known low performance schools.
9.5. **Relevant Work Experience** - there is an expectation that candidates will have undertaken work experience in veterinary and other animal establishments prior to applying. The University would not offer a place to a home/EU applicant who has no veterinary work experience however for some overseas applicant this may be waived if they come from a country with little or no existing veterinary profession.

Overall, the demographic profile of the cohort of admitted students is in line with current objectives of the School and there are no plans to introduce specific initiatives to change the profile of applicants or admitted students.

9.6. In September 2013, the School limited the number of students admitted to Year 1 to 120, which included students progressing from the pre-vet course and any BVSc student repeating or resuming the first year. From 2014 this number increased to a maximum of 150.

A business case has been made for the increase in admitted students and the staff feel that the increased number of students can be accommodated.

9.7. The number of HEFCE funded positions at the School is determined centrally by the University, but may be increased by application. These applications are considered in the context of the University’s overall funded targets. At the present time this number remains at 150 places.

9.8. After screening to ensure applicants possess the minimum academic qualifications, scores are awarded to shortlisted candidates before interview. These scores are based on GCSE results (15% towards total) predicted A level scores (15%) with the remaining 70% of the score derived from the personal statement on the UCAS form.

9.9. Interviews comprise a 20 minute face to face interview with 2 members of staff and 5 multiple mini interview (MMI) stations which assess the following; problem solving from first principles, communication skills, a practical task following written instructions, calculation and data handling and interpretation. The MMI resemble mini-OSCEs and participants are asked to respect rules of professional conduct and not to disclose the content of the MMI to others.

Interview panel members are selected from HEFCE funded staff members based on their availability. Care is taken to assemble a panel with a range of different research/teaching interests. Interviewers are trained (when the new admissions system was introduced an external teacher was hired and special attention was given to the fact that the interviewees are predominantly young adults. This training has been repeated for all new interviewers).

9.10. Under exceptional circumstances it might be possible for students to enter in a year other than year one (e.g. as a transfer from another UK programme due to personal circumstances); in these cases it may be necessary for the student to enter in a lower year.

9.11. Table 9.c below establishes to what extent students make progress in their studies. To this end, the School has looked at the students who were admitted initially and which year they have reached after the MNY has elapsed.

9.12. Students failing any unit after one resit opportunity are required to leave the Programme but may appeal the decision.

9.13. Overall, retention is 97%.
Table 9.b: Intake of veterinary students in the past five years

<table>
<thead>
<tr>
<th>Year</th>
<th>Number Applying for admission (UG)</th>
<th>Number admitted</th>
<th>Other entry mode (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013/14*</td>
<td>1404</td>
<td>123</td>
<td>8 (3 repeating the year, 4 pre-vet students and 1 transfer in from external course)</td>
</tr>
<tr>
<td>2012/13</td>
<td>1387</td>
<td>118</td>
<td>6 (3 Repeating the year, 3 pre-vet students)</td>
</tr>
<tr>
<td>2011/12</td>
<td>1475</td>
<td>121</td>
<td>**</td>
</tr>
<tr>
<td>2010/11</td>
<td>1476</td>
<td>122</td>
<td>**</td>
</tr>
<tr>
<td>2009/10</td>
<td>1344</td>
<td>115</td>
<td>**</td>
</tr>
<tr>
<td>Average</td>
<td>1417.2</td>
<td>119.8</td>
<td></td>
</tr>
</tbody>
</table>

*year prior to evaluation  ** No information available

Table 9.c: Student flow and total number of undergraduate veterinary students

<table>
<thead>
<tr>
<th>Number of students present after admitted year 1</th>
<th>Number of additionally admitted students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year1</td>
<td>115</td>
</tr>
<tr>
<td>2nd year</td>
<td>118</td>
</tr>
<tr>
<td>3rd year</td>
<td>106</td>
</tr>
<tr>
<td>4th year</td>
<td>101</td>
</tr>
<tr>
<td>5th year</td>
<td>99</td>
</tr>
<tr>
<td>6th year</td>
<td>0</td>
</tr>
<tr>
<td>&gt;6th year</td>
<td>0</td>
</tr>
<tr>
<td>Number undergraduate veterinary students</td>
<td>539</td>
</tr>
</tbody>
</table>

** Figures not available, ***students returning from intercalation

12009/2010
Table 9.d: Number of students graduating annually over the past five years

<table>
<thead>
<tr>
<th>Year</th>
<th>Number graduating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/14*</td>
<td>99</td>
</tr>
<tr>
<td>2012/13</td>
<td>94</td>
</tr>
<tr>
<td>2011/12</td>
<td>102</td>
</tr>
<tr>
<td>2010/11</td>
<td>105</td>
</tr>
<tr>
<td>2009/10</td>
<td>92</td>
</tr>
<tr>
<td>average</td>
<td>98.4</td>
</tr>
<tr>
<td>&gt;6th year</td>
<td>0</td>
</tr>
<tr>
<td>number undergraduate veterinary students</td>
<td>539</td>
</tr>
</tbody>
</table>

*year prior to visitation

Table 9.e: Average duration of studies (distribution of students in years)*

<table>
<thead>
<tr>
<th>Duration of attendance</th>
<th>number</th>
</tr>
</thead>
<tbody>
<tr>
<td>years 0/2014</td>
<td>0</td>
</tr>
<tr>
<td>years 1</td>
<td>0</td>
</tr>
<tr>
<td>years 2</td>
<td>0</td>
</tr>
<tr>
<td>years 3</td>
<td>0</td>
</tr>
<tr>
<td>years 4</td>
<td>0</td>
</tr>
<tr>
<td>years 5*</td>
<td>992)</td>
</tr>
<tr>
<td>years &gt; 5</td>
<td>0</td>
</tr>
<tr>
<td>number undergraduate veterinary students</td>
<td>539</td>
</tr>
</tbody>
</table>

1) 2009/2010
2) total number includes students who have intercalated from veterinary studies for one year
*year prior to visitation

Comments

9.14. The Visitors find that the criteria for assessment of Admission and Enrolment are fulfilled.

Suggestions

9.15. An analysis of the variability in scoring among interviewers involved in the admissions process is suggested to allow for standardisation.

Recommendations

9.16. None.
Chapter 10 – Academic and support staff

The competence of the full-time academic staff must enable coverage of all the subject areas of the curriculum, allowing research based teaching except where alternative arrangements are made for outside teachers. The number of full-time academic staff (FTE) must allow teaching of small groups, thus maximizing the learning opportunities for the students. A minimum percentage of 70% of the academic teaching staff should have veterinary training. Teachers of clinical veterinary subjects must be veterinarians, as should be those carrying out para-clinical services reporting to the public.

Part-time staff, residents and graduate students may lend support to full-time academic staff if they are appropriately integrated into the instructional programme. The Faculty should define which academic level is required.

Overall, the workload of the academic staff should be organised in such a way that apart from teaching and clinical duties, they should be able to perform research and other non-teaching-related academic activities within working hours.

Appropriate teacher supervision requires satisfactory teaching staff/student and teaching staff/support staff ratios.

Findings

10.1. Academic staff from a number of other Schools teach on the BVSc programme. The total FTE contributing to teaching from Schools other than SVS is 5.1 which includes 0.6 FTE in Biochemistry, 1.51 FTE in CCCA and 2.5 FTE Physiology and Pharmacology. If academic staff contribute to teaching to multiple programmes (this is the case for the pre-clinical compartments of the BVSc), they are counted as fractional appointments for the purposes of calculating FTEs.

10.2. When LVS was introduced in 2009, all support staff involved in clinical service support were transferred from SVS to LVS (by TUPE1). Since then the number of support staff employed by LVS has increased and currently stands at 97.0 FTE comprising: a senior finance executive, a CPD manager, a business development manager, 42 veterinary nurses, 23 technical staff and 34 administrators (receptionists, accounts managers etc.). In addition, 15 veterinary surgeons (who were in post at the time of the introduction of LVS) remain employees of LVS. A significant change since the 2009 visitation has been the increase in the number of nursing staff in the LVS hospitals. This was in response to the specific recommendation that undergraduate students should not be required to undertake compulsory EMS within LVS. In addition, Velcourt employ the Wyndhurst Farm Manager, the stockman and general farm support; as such these staff are not University employees.

---

1 Transfer of Undertakings (Protection of Employment) Regulations 2006
Table 10.a: Personnel in the establishment provided for veterinary training

<table>
<thead>
<tr>
<th></th>
<th>Budgeted posts (FTE)</th>
<th>Non-budgeted posts (FTE)</th>
<th>Total (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Academic staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching staff</td>
<td>VS 62.6* NVS 20</td>
<td>VS 1 1</td>
<td>VS 63.6</td>
</tr>
<tr>
<td>Research staff</td>
<td>0.2 2.0* VS 1.1</td>
<td>VS 19.4</td>
<td>VS 21.4</td>
</tr>
<tr>
<td>Others (please specify)</td>
<td>0 0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Total FTE</td>
<td>62.8 22</td>
<td>2.1 20.4</td>
<td>64.9 42.4</td>
</tr>
<tr>
<td>Total FTE (VS + NVS)</td>
<td>84.8 22.5</td>
<td></td>
<td>107.3</td>
</tr>
<tr>
<td>FTE providing last year teaching</td>
<td>32.7 1</td>
<td></td>
<td>33.7</td>
</tr>
<tr>
<td><strong>2. Support staff</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Responsible for the care and treatment of animals</td>
<td>57.2 0</td>
<td></td>
<td>57.2</td>
</tr>
<tr>
<td>b) Responsible for the preparation of practical and clinical teaching.</td>
<td>26.6 0</td>
<td></td>
<td>26.6</td>
</tr>
<tr>
<td>c) Responsible for administration, general services, maintenance, etc.</td>
<td>53.2 0</td>
<td></td>
<td>53.2</td>
</tr>
<tr>
<td>d) Engaged in research work</td>
<td>4.5 0</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>e) Others (please specify)</td>
<td>0 0 0</td>
<td></td>
<td>0 0</td>
</tr>
<tr>
<td>Total support staff</td>
<td>141.5 0</td>
<td></td>
<td>141.5</td>
</tr>
<tr>
<td><strong>3. Total staff</strong></td>
<td>221.3 22.5</td>
<td></td>
<td>248.8</td>
</tr>
</tbody>
</table>

*15.00 FTE of VS (teaching) and 1 FTE NVS (research) are employed in LVS and returned within the consolidated SVS/LVS budget.

**Academic Staff in SVS**

10.3. The University defines the number of academics in each School as the Academic Establishment. Within SVS there is a sub-set of academics that fall within a Clinical Establishment. Those within the clinical establishment are all MRCVS who spend a significant proportion of their time engaged in final year clinical teaching and include academics on Pathway 1 and Pathway 3. The School also has a Clinical Training Scholar Establishment that is reviewed annually.

10.4. In 2007, the University introduced a teaching focused academic track (Pathway 3). In other Schools, the majority of staff on this track are in non-progressable roles. However, in SVS clinical academics appointed on this track are normally in roles that are considered progressable (i.e. staff can move up to the next level provided they meet the progression and promotion requirements). Pathway 1 is the ‘standard’ academic pathway and Pathway 2 the research only academic pathway (the majority of the staff on this pathway are not core funded).

10.5. The School has 104 academic staff, of these 42 (40%) are on Pathway 1, 28 (27%) are on Pathway 2 and 34 (33%) on Pathway 3. Of the HEFCE (core) funded staff, 52% are on Pathway 1 and 41% are on Pathway 3. At present the School has two core funded Pathway 2 posts. Core-funded academics and LVS clinicians are included in the academic staff student ratio calculations.

- Pathway 1 staff include: 17 professors, 2 readers, 21 senior lecturers, and 4 lecturers.
• Pathway 2 staff include: 1 reader, 6 senior research fellows, 5 research fellows, 8 research associates and 8 research assistants.

• Pathway 3 staff include: 1 professor, 10 senior clinical/teaching fellows; 19 clinical/teaching fellows, 3 clinical/teaching associates and 1 teaching assistant (non-clinical).

10.6. The promotion process (to reader or professor) takes place annually. In the last 5 years 2 promotions to Professor have taken place and 4 to Reader. The School has also made four external Professional appointments on Pathway 1 and two on Pathway 3 since 2009 (one of these was a newly created post).

**Table 10.b: Allocation of academic (veterinary surgeon and non-veterinary surgeon) teaching staff – expressed as FTE – and support staff to the various departments**

<table>
<thead>
<tr>
<th>Department name</th>
<th>Prof./Reader/Chair</th>
<th>SL/STF</th>
<th>L/TF</th>
<th>TA</th>
<th>Other1</th>
<th>Technical</th>
<th>animal carers</th>
<th>Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVS</td>
<td>11.8</td>
<td>5.6</td>
<td>19.5</td>
<td>7.75</td>
<td>16.1</td>
<td>7.8</td>
<td>1.2</td>
<td>1.8</td>
</tr>
<tr>
<td>CCCA</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
<td>0.41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P&amp;P</td>
<td>1.0</td>
<td>1.0</td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td>0.3</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) clinical teacher; 2) veterinary surgeon; 3) non veterinary surgeon

**Table 10.c: Ratios students/staff**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Formula</th>
<th>Maximum</th>
<th>Ratio</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>no. undergraduate veterinary students / no. total academic FTE in veterinary training</td>
<td>5.21</td>
<td>below</td>
<td>8.381</td>
</tr>
<tr>
<td>R2</td>
<td>no. undergraduate students at Faculty / no. FTE total Faculty</td>
<td>2.25</td>
<td>below</td>
<td>9.377</td>
</tr>
<tr>
<td>R3</td>
<td>no. undergraduate veterinary students / no. VS FTE in veterinary training</td>
<td>8.61</td>
<td>below</td>
<td>11.057</td>
</tr>
<tr>
<td>R4</td>
<td>no. of students graduating annually / no. VS FTE in veterinary training</td>
<td>1.52</td>
<td>below</td>
<td>2.070</td>
</tr>
<tr>
<td>R5</td>
<td>no. total FTE support staff in veterinary training / no. total FTE academic staff in veterinary training</td>
<td>Recommended range 0.505-1.907</td>
<td>1.32</td>
<td>within</td>
</tr>
</tbody>
</table>

5: Indicators calculated with number of graduates were recalculated since wrong figure was used in the SER. The right number of graduates is 98.4 (SER Table 9.4 Page 153).
Comments

10.7. Staff of the School and those teaching and supporting the BVSc programme in all roles, appear to be happy in their work. There appears to be good esprit de corps and a dedication to task, particularly at a time of major curriculum review which can be stressful for staff.

10.8. The roles of Head of Teaching and Programme Director represent significant workloads. During the development of the new curriculum, there has been significant advantage in both of these roles being undertaken by the same person. However, as it moves into the implementation phase, the School may wish to consider whether one person can continue to fulfil both these roles.

10.9. Staff on Pathway 3 seem to be confident of progression. While the establishment of this pathway for progression is excellent, particularly for clinical staff with a significant teaching load, its effectiveness should be monitored in the future.

10.10. There is comprehensive administrative support which seems likely to be appropriate for managing the increased student numbers. The presence of the embedded HR, IT and Finance staff, who understand the sometimes unique and specific needs of the School, represent a significant benefit.

10.11. Centralisation of the administrative staff in one building on site is an advantage, maximising access to students and optimising the delivery of student support from the various administrative elements.

Commendations

10.12. The School is to be commended on the use of a project manager in the development of the new curriculum, as the project manager represents a key element contributing to the successful development and delivery of the new curriculum.

Suggestions

10.13. The development and delivery of the new integrated curriculum currently depends on the enthusiasm and dedication of the academic staff involved. Maintenance of the delivery of the course in future may require additional administrative support and this should be kept under review.

Recommendations

Chapter 11 – Continuing education

(see also Stage two)

The institution must co-operate with other professional organisations and competent authorities in the design, implementation and quality control of continuing education programmes.

It should strive to provide well-designed continuing education programmes in specific areas of practical veterinary medicine.

Findings

11.1. The School organises a wide range of Continuing Education (CE) Courses at the establishment both itself (via its CE Unit), and through LVS. These courses fall into a number of areas including clinical courses, two animal welfare modules from the RCVS Certificate in Advanced Veterinary Practice (CertAVP), SVS Continuing Education Unit which provides one of the two OV Training Courses available in the UK, an Animal Welfare Officer (AWO) training course, international conferences and externally organised CPD at Bristol.

11.2. The Langford CE Unit is currently providing a very simple distance learning package (its completion is a course prerequisite for the three week Official Veterinarian [OV] Training Course). The School is a member of the VETNET Life Long Learning Network and funding is available to appoint a veterinary surgeon to work with existing staff to develop templates for a Foundation Degree and CPD units.

11.3 The School is active in organising and delivering continuing education at an international level through research symposia and congresses held at the School and the wider University.

11.4. Many CPD events organized by external providers are hosted at Bristol. For example, in collaboration with the BCVA, Bristol contributed a two-day Herd Health and Welfare unit for the BCVA Advanced Practitioner Course. Another example is the Modern Equine Dentistry for Veterinary Surgeons course run in association with BEVA.

Comments

11.5. The clinical continuing education is delivered by LVS mainly through staff from LVS and SVS, only supplemented with external lecturers when necessary. The programme has expanded in recent years providing professional training in all aspects of veterinary sciences. The content of the clinical courses is “bottom-up”, driven through input by evaluation forms from veterinary practitioners attending the courses.

11.6. The CE unit at Langford has chosen at the moment not to invest in professional technology for distance learning, and will continuing to organize the lectures and training on site.

11.7. A leading meat quality researcher retired recently, but was replaced by an academic outside this field. Another meat quality researcher will retire in the next few years and so expertise in this domain will not be...
11.8  Bristol is not currently an active provider of RCVS CertAVP modules, with only 5 candidates currently enrolled, as priority has been given in recent years to the review of the undergraduate curriculum.

Suggestions

11.9.  None.

Recommendations

11.10. None.
Chapter 12 – Postgraduate education

(see also Stage two)

Towards a qualification in a specific area

The institution must co-operate with other professional organisations and competent authorities in the design, implementation and quality control of continuing education programmes leading to qualifications in the clinical and paraclinical fields, including the achievement of national specialist recognition.

Where appropriate, institutions should aim their programmes to meet the standards and regulations of the respective European specialist colleges and of the European Board of Veterinary Specialisation or equivalent bodies.

Research training

The institution must offer post-graduate training programmes by research (PhD or equivalent) based on an international-level programme in biomedical and veterinary research.

The programmes must be well designed and cover theoretical as well as practical training, leading to a certificate/degree within a period of three to four years.

The institution must provide an adequate number of places for research students.

Findings

12.1. In addition to the CPD programme, the School offers a number of postgraduate education courses:

- Clinical specialty training programmes for veterinary graduates - one year Internships as Junior Clinical Training Scholars (JCTS) and three or four year Residencies as Senior Clinical Training Scholars (SCTS).
- MSc Global Wildlife Health & Conservation
- MSc in Meat Science (closed for new entries, finish in 2015)
- MSc by Research
- Masters by Research (new program, started in 2014, intercalating veterinary and medical students)
- Clinical Research Tasters
- PhDs

12.2. This year, the Bristol Doctoral College (BDC), established in 2013 to oversee the management of all postgraduate research students, rolled out a Skills Training and Review (STaR) on-line system to record student progression information in order to reflect on their progress.
Clinical specialty training (Senior and Junior Clinical Training Scholars (interns and residents))

12.3. A committee was established in 2013 to oversee the way SCTS and JCTS students are managed at Bristol. This is chaired by Professor Sorrel Langley-Hobbs.

12.4. Both JCTs and SCTSs involved in training receive a tax-free stipend. The majority are funded either jointly by LVS and SVS or by SVS alone, or by charities or industrial partners.

Clinical specialty training (Senior and Junior Clinical Training Scholars (interns and residents))

Table 12.a: Clinical specialty training

<table>
<thead>
<tr>
<th>Clinical discipline</th>
<th>No. JCTS</th>
<th>No. SCTS</th>
<th>Diploma or title anticipated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Anaesthesia</td>
<td>0</td>
<td>3</td>
<td>DipECVAA*</td>
</tr>
<tr>
<td>Veterinary Pathology</td>
<td>0</td>
<td>2</td>
<td>RCPath, DipECVP*</td>
</tr>
<tr>
<td>Veterinary Clinical Pathology</td>
<td>1</td>
<td>1</td>
<td>DipECVCP*</td>
</tr>
<tr>
<td>Veterinary Public Health</td>
<td>0</td>
<td>1</td>
<td>DipECVPH*</td>
</tr>
<tr>
<td>Veterinary Neurology</td>
<td>0</td>
<td>2</td>
<td>DipECVN*</td>
</tr>
<tr>
<td>Veterinary Diagnostic Imaging</td>
<td>0</td>
<td>2</td>
<td>DipECVDI*</td>
</tr>
<tr>
<td>Equine Diagnostic Imaging</td>
<td>0</td>
<td>1</td>
<td>DipECVDI*</td>
</tr>
<tr>
<td>Equine Medicine</td>
<td>0</td>
<td>1</td>
<td>DipECEIM*</td>
</tr>
<tr>
<td>Equine Sports Medicine</td>
<td>0</td>
<td>1</td>
<td>DipACVSM</td>
</tr>
<tr>
<td>Bovine Health Management</td>
<td>0</td>
<td>1</td>
<td>DipECBHM*</td>
</tr>
<tr>
<td>Small Ruminant</td>
<td>0</td>
<td>1</td>
<td>DipECRSRH*</td>
</tr>
<tr>
<td>Small Animal Medicine</td>
<td>0</td>
<td>4</td>
<td>DipECVIM-CA*</td>
</tr>
<tr>
<td>Feline Medicine</td>
<td>0</td>
<td>2</td>
<td>DipECVIM-CA*</td>
</tr>
<tr>
<td>Small Animal Surgery</td>
<td>0</td>
<td>3</td>
<td>DipECVS*</td>
</tr>
<tr>
<td>Zoological Medicine</td>
<td>0</td>
<td>1</td>
<td>DipECZM*</td>
</tr>
<tr>
<td>Veterinary Behavioural Medicine</td>
<td>0</td>
<td>3</td>
<td>DipECAWBM*, ASAB Certified clinical animal behaviourist (CCAB)</td>
</tr>
<tr>
<td>Small Animal Rotating Internship</td>
<td>7</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Zoetis Feline Medical Research</td>
<td>0</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

All programmes marked * are certified by the EBVS.

Research education programmes

Table 12.b: Number of research students enrolled in different programmes

<table>
<thead>
<tr>
<th>Type of degree</th>
<th>Part (P/T) of Full time (F/T)</th>
<th>Vet or Non-Vet</th>
<th>Duration of Study*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>18 F/T 1 P/T</td>
<td>5 Vets 14 non-vets</td>
<td>3-4 years for all F/T</td>
</tr>
<tr>
<td>MSc by Research</td>
<td>3 F/T 5 P/T</td>
<td>5 Vets 4 non-vets</td>
<td>2 years for all F/T</td>
</tr>
<tr>
<td>Other doctoral level 1)</td>
<td>28</td>
<td></td>
<td>3 or 4 years</td>
</tr>
</tbody>
</table>

1) includes: MSc Students and Clinical Scholars who are doctoral level students

*All PhD F/T PhD students are registered for 3-4 years and FT MSc (R) students for 2 years
12.5. Postgraduate research students require a grant for their training programme to cover fees and subsistence expenses. The majority are funded by research grants, however some are self-funded.

12.6. Home students are funded from a variety of sources including: RCUK (e.g. the BBSRC DTP programme in Global Food Security), the Wellcome Trust, other charities (Pet Plan, Pet Savers etc.) and UK sector bodies (British Pig Executive, English Beef & Lamb Executive etc.). There are a small number of University-funded PhD studentships available each year (some are linked to NIHR funding), but these are highly competitive awards.

12.7. Most overseas students are funded by grants from their own government or relevant organisations, e.g. British Council Department for International Development.

12.8. Since the last full RCVS visitation 12/32 of JCTs have already entered Residencies or PGR programmes; 31/68 of the Senior Clinical Training Scholars (SCTs) have completed their training and have already achieved a Diploma. Another 20/68 SCTs have registered for or have completed an MSc or PhD. Twenty-one SCTs have found employment in Veterinary Schools, and 19 are working in private referral practices.

Comments

12.9. The MSc in sustainable Meat Production is closed to new entrants, as the leading meat quality researcher at Bristol retired and was replaced by an academic in a clinical discipline.

12.10. The School now has a quota of clinical training posts that is agreed annually, with automatic reappointment of the posts.

Suggestions

12.11. Overloading the Senior Clinical Training Scholars with teaching of undergraduates should be avoided and sufficient opportunities for full preparation for the specialist level should be provided.

12.12. Much of the postgraduate support is based in Bristol and consideration should be given to ways of enabling Langford-based residents and other postgraduate students to engage in the wider postgraduate training opportunities available in Bristol.

12.13 Provision of a designated space for postgraduates to meet would be helpful to facilitate integration and networking.

Recommendations

Chapter 13 – Research

It is desirable for undergraduate students to gain experience of research by undertaking a research project and writing a report on it.

The Faculty should provide an appropriate balance for these opportunities between basic, applied and clinical research.

The Faculty should assign an appropriate number of academic and technical posts specifically to research.

The Faculty should also allocate adequate facilities, equipment and operating funds to research.

Findings

13.1. Research Projects - Under the current, outgoing, curriculum all 3rd Year BVSc students undertake a research project, in which they are expected to work in a team of four students to write a mock grant application, as part of the Basic Clinical Science unit. This is marked by both the group’s supervisor and one other member of the School’s research staff.

13.2. Intercalation and vacation projects - All students have the opportunity to intercalate for the period of one year for a BSc or MSc/MRes degree with the associated substantial research projects. This opportunity to undertake research is advertised during the introductory sessions hosted for 1st and 2nd year students followed by meetings between the Head of Research and those expressing an interest as appropriate. In addition, a ‘research awareness day’ is held in Year 3 when staff give presentations on their research and promote intercalation opportunities.

13.3. Most students intercalate between years 3 and 4 of the course and as shown in table 13.a, in the last three years more than 25% of the year group have intercalated. Students intercalate in a range of subjects in Bristol and at other Universities, although the majority intercalate in subjects offered in FMVS. In recent years a significant proportion of these projects have been funded by the Wellcome Trust’s CVTRI (unfortunately the Wellcome Trust no longer funds intercalating veterinary surgeons). The School’s BSc in Animal Welfare and Behaviour has been particularly successful in attracting intercalators from other UK Vet Schools as well as from Bristol.

13.4. In 2014 a new MRes in Health Sciences Research will start in CCCA, being run by the FMVS, which has been designed for intercalating students on all three professional programmes. There is one veterinary student intercalating on this course in 2014-2015. A number of students are also encouraged to undertake vacation projects at the end of the second or third year.

Table 13.a: Intercalation numbers 2011 – 2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students intercalating</td>
<td>20</td>
<td>25</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>Other doctoral level(1)</td>
<td>28</td>
<td></td>
<td></td>
<td>3 or 4 years</td>
</tr>
</tbody>
</table>
13.5. **Additional Opportunities** - Students are also given the opportunity to increase their research awareness by way of the School-run research seminars. These seminars are open to all staff and students on site. As part of the new BVSc curriculum students in Years 1 and 2 have timetabled lectures from the School’s research leaders who talk about their careers and introduce their research. The students in Year 4 also arrange for staff to give research seminars as part of the ‘Clinical Club’ series for which they have attracted Industry sponsorship, and to which all years are invited.

**Comments**

13.6. SVS delivers a highly research-based education and it encourages all students to gain research experience.

13.7. Research activity of students is very important; it widens the professional horizon of the graduates, promotes training of the next generation of scientists and helps future practitioners in understanding and evaluating results of research. Reintroduction of research projects in the new curriculum is highly welcomed by the visiting team. A higher proportion of intercalating students is likely to go on to postgraduate clinical or research qualifications.

13.8. The new Faculty of Health Sciences, which will include SVS from 2015, provides excellent opportunities for research collaborations.

13.9. The learner-centred teaching approach of SVS provides a good basis for research activity amongst undergraduate students.

**Suggestions**

13.10. None.

**Recommendations**

13.11. A business case was provided for reintroduction of research projects to years 3 and 4 of the new curriculum with associated costs and there is significant buy-in from staff across the Faculty for these research projects. As the research projects will commence for year 3 undergraduates in the 2015-16 academic year it is recommended that resources are approved and implemented urgently to avoid delay in timetabling of the programme (see also recommendation in Chapter 3 – Finances).
Chapter 14 – Extra Mural Studies (EMS)

EMS must be an integral and structured part of the education and training of veterinary students. Veterinary schools will need to be able to demonstrate how it is built into the overall curriculum.

Students must undertake a total of 38 weeks of EMS before they graduate:

Twelve weeks should normally be devoted to animal-husbandry related EMS so that students gain experience of the behaviour of normal animals in their own environments.

Clinical EMS must comprise at least 26 weeks across a broad range of areas.

EMS must include the equivalent of at least one week devoted to veterinary public health, during which time visits to meat plants are essential.

Students must keep a log of their learning and experience throughout their EMS.

There must be a system in place to enable EMS providers to report back to the school on their assessment of the performance of students during EMS.

The student’s experience log and the feedback from EMS providers must form a part of the student’s formative assessment against the RCVS’s ‘Day One’ competences.

There must be a member of the academic, or academically-related staff, responsible for the overall supervision of all types of EMS, including liaison with EMS providers.

There must be a mechanism to enable students to formally report on the quality of the instruction and experience of EMS placements.

Students must have access to a suitable database of EMS placements, and must be able to seek and obtain advice and guidance on the suitability of EMS placements.

Findings

Pre-Clinical EMS

14.1. The RCVS requires that every student complete 12 weeks of pre-clinical EMS during BVSc Years 1 and 2. This must be completed by the end of August prior to enrolling for Year 3 so that registration for Year 3 can take place. To ensure a broad range of experience, students’ pre-clinical EMS time should be divided into a minimum of 2, ideally consecutive, weeks of:

- Lambing
- Equine
- Pig or poultry (or one week of each)
- Dairy
- Veterinary nursing or kennels/cattery
- A placement of their own choosing

Consecutive weeks in one species area are recommended to ensure consolidated learning.

The following table taken from the EMS Handbook provides guidelines on suitable pre-clinical placements, and their timing to integrate with the Animal Management units in Years 1 and 2:

<table>
<thead>
<tr>
<th>Species</th>
<th>Timing</th>
<th>Duration</th>
<th>Minimum size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep / lambing</td>
<td>Easter Y1*</td>
<td>2 weeks</td>
<td>Flock $\geq 300$ ewes</td>
</tr>
<tr>
<td>Equine / stables</td>
<td>From summer vacation Y1</td>
<td>2 weeks</td>
<td>Any commercial establishment</td>
</tr>
<tr>
<td>Small animal practice or kennels / cattery</td>
<td>From summer vacation Y1</td>
<td>$\geq 1$ week $\geq 1$ week</td>
<td>Shadow veterinary nurses (can be mixed practice) $\geq 50$ dogs/cats</td>
</tr>
<tr>
<td>Dairy</td>
<td>From summer vacation Y1</td>
<td>2 weeks</td>
<td>$\geq 100$ milking cows</td>
</tr>
<tr>
<td>Pigs and/or Poultry</td>
<td>Over Christmas or Easter vacation of Y2</td>
<td>1 week of each or 2 weeks of one species</td>
<td>$\geq 20$ sows $\geq 500$ birds</td>
</tr>
<tr>
<td>Exotics / wildlife</td>
<td>Preferably summer Y2</td>
<td>Optional</td>
<td>Overseas placements must be approved; safaris are not EMS; clear learning objectives needed.</td>
</tr>
<tr>
<td>Examples of ‘Other’:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camelids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab animals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Lambing is not possible if pregnant or ill/injured; other species can be chosen at Easter if the student is capable medically. Lambing is then undertaken at Easter Y2.

A week is defined as the normal working week of the business concerned and may involve participating in weekend and out-of-hours work.

14.2. In addition to attendance certification and feedback from placement providers, two written reports are required to be submitted by the student for assessment purposes; a Lambing Report in Year 1 as part of the assessment for the Animal Management-1 unit and another production animal report in Year 2 as part of the Animal Management-2 unit.

Clinical EMS

14.3. All students use a ‘Foster Practice’ for part of their clinical EMS. Students are advised to spend between 10 and 14 weeks, spread over the three-year clinical period, at their Foster Practice. This enables them to gain a continuous core of experience in a familiar practice environment.

14.4. Students may choose a “two-species” practice as their main Foster Practice and then spend some extra time (normally about four weeks) in a practice for the third species that their foster practice does not provide exposure to (small animal, equine or farm animal). Alternatively, they may have three single species Foster Practices, spending about four weeks in each of two species areas and then longer in the area in which they are most interested.

14.5. The School has built a good relationship with a number of Foster Practices, who are very supportive of the
system. Students choose their Foster Practices during their second year, and arrange a one-day visit to meet the staff, usually in the Easter holidays of their second year.

14.6. Students may choose how to spend the remainder of their clinical EMS weeks within set guidelines that can include a limited time spent overseas (10 weeks) and undertaking research (usually 6 weeks). They are encouraged also to choose some specialist placements to match interests and complement the species areas they track in during part of their final year.

14.7. During the Easter and summer vacations of their third year (prior to entering Year 4) students undertake a minimum of 8-10 weeks clinical EMS, with a minimum of 6 weeks being with their Foster Practice. The remainder of their clinical EMS is undertaken prior to sitting finals. EMS time is now scheduled as part of the extended final year in up to 6-week blocks. This has helped to reduce the pressure on practices to provide placements during traditional vacation time.
Support structures for EMS

14.8. Professor David Barrett has very recently taken over from Professor Ed Hall as the Academic EMS Director, the senior academic responsible for the oversight of EMS. In 2013, as part of a process to improve EMS support, Ms Veronica Roberts was appointed as Academic EMS Co-ordinator. This role was split in 2014 to further enhance student support with Ms Roberts remaining as Academic Clinical EMS Co-ordinator and Mrs Julie Macfarlane taking up the post of Academic Pre-clinical EMS Co-ordinator.

14.9. The EMS administration team comprising 2.5 FTE is embedded within student administration, now located in the Dolberry building, with 0.5 FTE based for much of their time in Southwell Street to specifically support pre-clinical EMS.

14.10. Guidance for choosing placements is available to students from the EMS administration office, the EMS Co-ordinators and personal tutors using an in-house database available through the VLE Blackboard. Guidance on how to arrange placements, Health and Safety and insurance, and how to behave professionally on placement are available in the student EMS Handbook.

14.11. The Handbook is available only through the University’s VLE so that it can be updated as soon as required. In the same portal are attendance forms and links to the EMS “Driving Licences”. Completion of the Driving Licence is checked by administrative staff for both the 1st and 3rd year of study. As far as possible, all communications regarding EMS are now electronic, allowing for better recording and traceability.

14.12. The student administration office arranges the students’ first pre-clinical EMS placement (lambing), for them. For the majority of placements, students will contact the placement provider themselves to arrange their visits. A small number of establishments have requested that they should only be contacted by the administration office.

14.13. Students use the RCVS Student Experience Log (SEL) to record their experiences and reflections during EMS. The experience of particular skills, which they gain during their EMS, will be carried forward to their new graduate Professional Development Programme log. Furthermore, students develop the ability to reflect on their performance, which is vital for Clinical Governance and ensuring Day One competence.

14.14. The SEL is also being used to approve placements prior to the students’ attendance. The School reviews the learning objectives to ensure they are appropriate and confirm that Health and Safety requirements are met. By approving Health and Safety requirements prior to a student attending a placement, the School is able to provide their students with liability insurance.

14.15. Students may contact the EMS administration office by visiting in person or by telephoning during office hours, or via a dedicated email address. For non-emergency enquiries they will receive a response within 3 working days. In an emergency situation students are given clear instructions to call the University security service at any time 24 hours a day. Emergency numbers are on the first page of the EMS Handbook. Security staff can then contact one of a number of academic staff using their personal mobile telephone numbers if required.

14.16. In response to an increasing number of overseas students, the School has made allowances where they will consider approval of some pre-clinical placements abroad. However, consideration is only given to placements where there would be very little difference in husbandry of species between the UK and the
proposed country. For example, a placement at a dairy farm in the Republic of Ireland has been approved, as has equine management at a city riding school in Hong Kong. Students are required to complete a risk assessment prior to approval and work has started on making the application process electronic.

**Feedback mechanisms**

14.17. An EMS student focus group has been established and the Academic Director attends the staff-student liaison committee. Student feedback on recent changes in the way EMS is managed and on the SEL has so far been very good. Additionally, the School is currently developing processes whereby all students will receive their feedback from EMS placements via personal tutors and clinical deans.

**Comments**

14.18. Pre-clinical EMS is adequate in quantity and covers ample species areas. Students report that they feel well equipped through this EMS when advancing to the later years of the course.

14.19. The Foster Practice system works well and the students are happy with it. Students made comments about the system providing increased support and opportunity for clinical skills practice. Appropriate measures are in place where there is difficulty in obtaining a Foster Practice and there is adequate flexibility to change Foster Practices if necessary to ensure students are able to obtain maximum benefit from similar experiences.

14.20. The perennial problem of finding placements close to home and the cost of EMS were mentioned by students, and the School works hard to minimise these difficulties. The EMS hardship fund was recognised by students as an accessible means of obtaining financial support in difficult circumstances.

14.21. The School finds every student their first (lambing) placement, which was appreciated as a good introduction to EMS. There is also appropriate support for students from the EMS department within the School where there is difficulty in finding a particular placement.

14.22. The SEL has been adopted throughout all 5 years and staff are becoming more familiar with it – there was enthusiasm and commitment within the whole EMS department which has recently seen increased resource.

14.23. Detailed processes are in place for problems that may be encountered whilst students are undertaking EMS. There is a clear primary contact and feedback mechanism within the School for different eventualities that may occur whilst students are on extra mural placements.

**Suggestions**

14.24. The School could make better use of the SEL, in particular for linking to EMS Feedback Forms, recording of students’ reflective reports to make management of the process easier and making better use of the data that can be downloaded from the system for further analysis.

**Recommendations**

14.25. None.
Stage 2

Internal quality assurance systems

Veterinary schools must pass Stage 2 of the EAEVE Evaluation procedure in order to be deemed “accredited” by EAEVE. Schools that only pass Stage 1 will be deemed to be “approved” by EAEVE.

For RCVS purposes, Schools must pass both Stage 1 and Stage 2 to be recognised for registration purposes in the UK.

The Faculty applying for evaluation at Stage two must have gained prior approval on the level of Stage 1 evaluation. For Stage 2 evaluations the Faculty, in addition to Stage 1 requirements, is required to demonstrate how responsibility for quality is followed up with actual quality assurance. Faculties should have a policy and associated procedures for the assurance of the quality and standards of their programmes and awards. They should also commit themselves explicitly to the development of a culture which recognises the importance not only of quality, but also quality assurance. To achieve this, faculties must develop and implement a strategy for the continuous enhancement of quality. The strategy, policy and procedures should have a formal status and be publicly available. They should also include a role for students and other stakeholders. Hence a prerequisite for the status of an accredited institution will be the existence of a system of internal quality assurance that complies with the criteria set by the Standards and Guidelines for Quality Assurance in the European Higher Education Area established in 2005 by the European Association for Quality Assurance in Higher Education (ENQA, Helsinki 2005) (http://www.enqa.eu/index.php/home/esg/).
Chapter 1 – Policy Statement

Bearing in mind, that postgraduate education and research are the basis for the advancement of veterinary science and hence have a great impact on undergraduate education, as laid down in the Principles and of the Evaluation of Veterinary Education in Europe, the Faculty must provide a clear policy and set of procedures for internal quality control and quality assurance of its teaching and research programme. The policy should have a formal status and be publicly available. It should also include a role for students and other stakeholders. The policy statement is expected to include the:

- relationship between teaching and research so that an established definition of research education and research quality is evident
- Faculty’s strategy for quality and standards
- organisation of the quality assurance system
- responsibilities of organisational units and individuals for the assurance of quality
- involvement of students in quality assurance
- ways in which the policy is implemented, monitored and revised

Findings

1.1. Bristol Vet School practises research-informed teaching and all academic staff are expected to engage in scholarship. All academic staff are members of one of the School’s three research groups and academic career progression at Bristol is dependent on staff being able to demonstrate that they meet the expected criteria for Teaching, Research and Professional values. For academics on the University’s Pathway 3, research can include pedagogical research and/or clinical research.

1.2. Timely and adequate student feedback is considered essential for the monitoring and assurance of the Programme. Student attitudes to the content, delivery and overall satisfaction with the programme are used alongside engagement with external evaluators and examiners, the FQET teams and the School’s Teaching and Learning Adviser to inform a process of review and improvement. The feedback from students is collected in various ways at unit level and in a format that is most appropriate for the Unit (paper, online questionnaires, focus groups etc.). Response rates are variable and the School is striving to better engage students with the feedback. One strategy has been to improve the timeliness and accessibility to the outcomes of their feedback by use of the VLE; thus demonstrating the value of their efforts.

1.3. The University’s processes for ensuring the quality of its provision are judged by the UK’s Quality Assurance Agency for Higher Education. The last audit was in 2009. The QAA is a full member of ENQA, which complies with the European Standards and Guidelines for Quality Assurance in Higher Education.

1.4. The Faculty has a Faculty Quality Enhancement Team (FQET), which assures the quality of learning, teaching and assessment, and student experience in the context of the research environment that
underpins it. It helps regulate University-wide monitoring mechanisms in respect of learning and teaching quality enhancement and assurance. This process is overseen by the University’s Academic Quality and Partnerships Office (formerly the Education Support Unit (ESU)).

1.5. Staff from SVS sit on (and currently chair) the FQET team and through that process are able to identify and communicate aspects of best practice from other schools that may support the veterinary undergraduate programme.

1.6. The University also operates a programme of School Reviews every 5-6 years. The last SVS review was undertaken in 2012. These involve internal and external panel members and cover issues of teaching and research quality. At School level, VPC monitors quality and standards at its regular meetings.

1.7. In addition an annual Programme Review is undertaken and this process is overseen by the University’s Academic Quality and Partnerships Office. The outcome of review may have a significant influence and impact in introducing changes to the Programme in response to feedback from external examiners, students and other key stakeholders.

Figure 1: Structure of the quality assurance system for Teaching at the University of Bristol.
Comments

1.8. The School has decided at this stage not to undergo a separate EAEVE visit to evaluate its compliance with Stage 2 requirements, although it would appear to meet the general principles of quality assurance sufficient to meet current RCVS requirements. See also sections on Monitoring and assessment of students and Monitoring and assessment of teachers and instruction in Chapter 5 above.

Suggestions

1.9. None.

Recommendations

1.10. None.
Chapter 2 – Assessment of students, post graduate education and student welfare

Undergraduate education

- admission of national and foreign students

Enrolled students must be assessed regularly using published criteria, regulations and procedures which are applied consistently. Student assessment procedures are expected to:

- be designed to measure the achievement of the intended learning outcomes and other programme objectives, e.g. day 1 competences
- have clear and published criteria
- where appropriate, not rely on the judgments of single examiners
- results of assessment must be documented properly
- be subject to administrative verification checks to ensure the accuracy of the procedures.
- in addition, students should be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subject to, what will be expected of them, and the criteria that will be applied to the assessment of their performance.

Post-graduate student education; academic track

Information on the following topics is required:

- admission of national and foreign students
- underlying study programmes, requirements and programme-assessment
- student assessment procedures and results

Post-graduate student education; professional track

Information on the following topics is required:

- types of programmes offered and admission procedures for national and foreign students
- cooperation with other institutions
- student assessment procedures and results

Student welfare

Information on the following topics is required:

- measures taken to prevent zoonoses
• general and specific student counseling

Findings

2.1. The School implements a comprehensive programme of assessment for the BVSc in compliance with the University’s Regulations and Code of Practice for Taught Programmes. The programme of assessment is summarised in the BVSc Assessment Matrix, which is reviewed and updated annually as part of Annual Programme Review (APR, Part 1 in July, Part 2 in October). The matrix includes details of assessments for each unit in each year of the BVSc and includes mapping of assessment methods and units against domains of competence (cognitive, practical and professional) and Miller’s pyramid.

2.2. Formative assessments are provided to promote student learning and support preparation for examinations and clinical rotations. Additionally, formative assessments are used to ensure students experience particular formats (e.g. a practice spot test) and extensive use is made of the University’s eBiolabs system to assess students in preparation for various aspects of the course including laboratory practicals and case-based learning sessions.

2.3. Summative assessments are primarily conducted during the University examination periods (January and May/June) with re-sit examinations in August/September. Some practical examinations (OSCEs and DOPS) are undertaken at other times e.g. DOPS throughout clinical rotations, Basic Clinical Science OSCEs in March prior to the first clinical extramural studies placement (EMS).

2.4. Students are normally allowed one re-sit attempt unless having valid extenuating circumstances, in which case they are allowed to repeat the assessment without penalty i.e. as for the first time.

2.5. The School has undertaken a major review and modernisation of assessment as part of the curriculum review process and has made changes in the existing as well as new curriculum. Therefore, the development and delivery of assessments has been, and continues to be, accompanied by a comprehensive programme of staff development with in-house training, collaboration with the other professional programmes (Medicine and Dentistry) and attendance at external courses.

Comments

2.6. Current RCVS requirements have been met. Refer to Chapter 5 above for additional comments on Monitoring and assessment of students and Student welfare and to Chapter 12 – Postgraduate education for comments on this area.

Suggestions

2.7. None.

Recommendations

2.8. None.
Chapter 3 – Assessment of teaching staff

Institutions should ensure that their teaching staff recruitment and appointment procedures include a means of ensuring that all new staff have at least the minimum necessary level of competence.

Teaching staff should be given opportunities to develop and extend their teaching capacity and should be encouraged to improve their skills. Opportunities for didactic and pedagogic training and specialisation should be available. The institution should describe any systems of reward for teaching excellence in operation.

A system for assessment of teaching staff must be in operation and should include student participation.

Findings

3.1. The School operates a comprehensive programme of assessment of teaching and staff by students, described in Chapter 5 – Teaching, quality and evaluation above.

3.2. The University’s recruitment process is rigorous and ensures that new members of academic staff have been required to demonstrate teaching potential and/or experience. Clear appointment criteria are published for each post and these are advertised in such a way as to encourage the widest possible range of applicants. The short-listing process requires applications to be matched against ‘Essential’ and ‘Desirable’ criteria. Teaching experience is one of the ‘Essential’ criteria.

3.3. Newly appointed staff must successfully complete an Initial Service Review (this takes place after 12 months for academic staff). During this time they must demonstrate an acceptable standard of performance in teaching, research and administration.

3.4. Once confirmed in post, assessment of a staff member’s teaching ability is undertaken in a variety of ways that includes peer observation. A revised local level peer observation process was introduced in 2012-13 to the School that is aligned with University guidelines.

3.5. All academic staff must undertake an annual review with a senior academic (there may be two reviewers if the staff member also has a clinical role). Intended to be part of the cycle of reflection and planning, this process encourages and supports the staff in identifying and engaging with appropriate development opportunities in teaching and learning.

3.6. Feedback on staff is also provided by the Unit Lead to the BVSc Programme Director and student feedback and feedback from peers is also taken into account. If concerns are raised about an academic’s teaching ability measures will be put in place rectify the problem (further training, peer observation, active mentoring etc.).

3.7. The University has a number of schemes for recognising and rewarding excellence in teaching and the support of the student experience. In addition, the ‘Vice-Chancellor’s Award for Education’ is awarded to one person or team in recognition of their exceptional contribution to education and enhancement of the student learning experience at Bristol.

Comments

3.8. Current RCVS requirements have been met. Refer to Chapter 5 above for additional comments on the
teaching and learning environment and Monitoring and assessment of teachers and instruction.

Suggestions

3.9. None.

Recommendations

3.10. None.
Chapter 4 – Assessment of learning opportunities

The Faculty must provide proof of a quality assurance system that promotes and monitors the presence of an academic environment highly conducive to learning including self-learning. Type, provision and updating of appropriate learning opportunities for the students should be clearly described as well as the involvement of students. The institution should also describe how it manages the promotion of up to date facilities for supervised and self-studies and the promotion of lifelong-learning.

Findings

4.1. Learning opportunities encompasses a number of aspects of an educational environment, including having staff who are qualified to teach, space and facilities for students to learn in and quality assurance and feedback on the space and process. The majority of staff who teach on the BVSc course within the SVS either already hold a teaching qualification or are enrolled on the Teaching and Learning in Higher Education qualification (CREATE) that will lead to Fellowship of the Higher Education Academy. SVS has developed a modular programme about teaching in the clinical environment.

4.2. An optimal environment for student learning requires them to have both facilities and space. There are 144 computers provided for BVSc students in five different buildings at the Faculty and the School at Langford and there are 16 lap-tops for students to borrow and use anywhere in the Veterinary Sciences Library to access eJournals, eBooks and databases. The Medical Library facilities in Bristol have recently been refurbished to improve and increase study spaces. The Veterinary Sciences Library at Langford has recently been updated to create a more welcoming and flexible study space with improved facilities. This includes: a reconfiguration of the use of space to create more study spaces, creation of group study rooms, a larger PC room so students can work in groups, two silent study rooms and power sockets for all study spaces reflecting transition to a ‘digital first’ strategy for e-journals and e-books.

4.3. There are several rooms in the Pearson Building at Langford that have been reconfigured and refurbished for small group teaching and private study. There is an additional quiet study space and several small group work rooms within the building referred to as the Student Barn.

4.4. While SVS maintains direct control over the veterinary programme, many aspects of the general learning environment are overseen directly by the University.

Comments

4.5. Current RCVS requirements have been met. Refer to Chapter 5 above for additional comments on the teaching and learning environment and to Chapter 6 – Facilities and equipment and Chapter 8 – Library and learning resources for further comments on these areas.

Suggestions

4.6. None.

Recommendations

4.7. None.
Chapter 5 – Assessment of training programme and the award of the title of Veterinary Surgeon

Assessment is expected to include:

- development and publication of explicit intended learning outcomes, including a description of essential competences required at graduation (the so-called “day one- skills”)
- procedures for formal curriculum and teaching programme approval and regular reviews
- procedures monitoring delivery of the curriculum and teaching programme
- assurance concerning the participation of students in quality assessment activities
- parameters assessed and procedures to monitor regular feedback from stakeholders and graduates
- provision of a structure that promotes life-long learning

Findings

5.1. The procedures for curriculum and teaching programme approval and review have been described above, as has the involvement of students in feedback and QA activity.

5.2. Learning objectives are provided for all taught sessions in the School. The learning objectives for the units of the veterinary curriculum are detailed within the outcomes documentation provided by the University Education Support Unit (EU). These have been designed in order to comply with the Day One skills requirement for students.

Comments

5.3. Current RCVS requirements have been met. Refer to Chapter 4 – Curriculum and Chapter 5 Essential competences at graduation – the RCVS Day One Competences for further comments.

Suggestions

5.4. None.

Recommendations

5.5. None.
Chapter 6 – Assessment of quality assurance systems for clinics, laboratories and farm

The Faculty should describe the system(s) of quality assurance it possesses to monitor and assure clinical, laboratory and farm services.

Findings

Clinical areas

6.1. These areas are, for the most part, operated by Langford Veterinary Services (LVS). LVS maintains a strict quality assurance process, ensuring that each element of the clinical service has:

- Clear policies
- Standard Operating procedures that staff are expected to follow
- A comprehensive audit system
- A reporting and investigation structure to handle incidents and complaints

6.2. Regular meetings take place to discuss possible improvement that could be made to the service. These occur both internally and as part of the SVS-LVS Partnership Board cycle, and ensure that the University remains appraised of the ongoing environment within the clinical practice. The primary focus of the service remains fixed upon patient safety and ensuring the highest quality of service. All clinics are members of the RCVS Practice Standards Scheme – The Small Animal Hospital and Equine Hospital are RCVS Accredited Hospitals and the first opinion practices have RCVS Accredited General Practice Status.

Laboratory diagnostic services

6.3. Regular quality checks are carried out within each lab on a regular basis by the resident technicians, at intervals dictated by the particular test or discipline in use. The standard operating procedures (SOPs) in place for each laboratory include:

- Action to be taken when reviewing the results
- Whether the results from the relevant test run should be accepted and reported
- Whether the test has failed and it should be re-run, or additional action should be taken

6.4. This ensures that any variation in performance can be noted, but will account with external influences such as natural wear and tear or the deterioration of samples. Routine maintenance is scheduled to occur prior to any of these results falling outside of our quality control limits.

Farm Facilities

6.5. The University’s Wyndhurst Farm is currently managed by an external company, Velcourt, which is responsible for implementing its own quality assurance structure, on behalf of the University, to ensure that requirements are met. Regular meetings of the Farm Board are held to ensure the continued smooth
running of the farm, with reports presented to the Senior Management Committee. These reports provide the basis for ongoing strategy related to the Farm and its use within the teaching environment.

6.6. The farm participates fully in the national Assured Food Standards “Red Tractor” approved farm assurance schemes that are relevant to the different livestock areas of the enterprise, namely:

- The Dairy Farm Assurance Scheme as required by Müller Wiseman Dairies.
- FABBL – Farm assurance for beef and lamb production.

Comments

6.7. Current RCVS requirements have been met.

Suggestions

6.8. None.

Recommendations

6.9. None.
Chapter 7 – Assessment of continuing education

The Faculty should describe the system of quality assurance it possesses to monitor and promote the design, implementation and quality control of its own, or joined Continuing Professional Development (CPD) programmes in specific areas of practical veterinary medicine.

Findings

7.1. The School operates two different methods for assuring the quality of continuing education (CPD). The first variety, for those that are non-award bearing and the second for the official awards of RCVS Certificate in Advanced Veterinary Practice (CertAVP) or Official Veterinarian (OV).

7.2. The Continuing Education Units (CE Unit) within the School and Langford Veterinary Services (LVS) provide CPD for the purpose of ensuring that veterinary professionals are able to continuously update their knowledge and skills. The most common form of evaluation for these non-award bearing courses comes in the form of direct feedback from participants, usually as an evaluation questionnaire for both physical and online courses. These results are scrutinised and then applied in order to provide improvements, to the course, or to provide new courses if there is sufficient need. All courses are delivered by clinical teaching staff employed by the University or by LVS as well as nurses from the teaching hospitals. Oversight of the quality of the courses is the responsibility of the Chief Executive of LVS reporting directly to the LVS Board, chaired by the Dean of the Faculty.

7.3. As both CertAVP and the OV course lead to a recognised award, the quality assurance systems involved are identical to those for other taught programmes, including the reporting of results to an Examination Board. The Faculty has a number of Faculty Quality Enhancement Teams (FQET), who assure the quality of learning, teaching and assessment, and student experience in the context of the research environment which underpins it. They help regulate University-wide monitoring mechanisms in respect of learning and teaching quality enhancement and assurance.

Comments

7.4. Current RCVS requirements have been met. See Chapter 11 – Continuing education for further comments on the School’s provision of CPD programmes.

Suggestions

7.5. None.

Recommendations

7.6. None.
Chapter 8 – Assessment of research

The institution should describe the system of quality assurance it possesses to develop and maintain and audit research programmes. Of particular interest is how research provides opportunities for student training, staff promotion, and how research methods and results are conveyed into basic veterinary training.

Findings

8.1. The University of Bristol is globally recognised for the quality of its research. In order to maintain and uphold the high standards of its research it continues to undertake initiatives to ensure that integrity, ethics and excellence are at the core of its research activities and fully embedded in its research culture.

8.2. The University applies robust ethical principles to its research to protect the rights, dignity, health, safety and privacy of research subjects, the welfare of animals and the integrity of the environment. It is committed to protecting the health, safety, rights and academic freedom of researchers and the reputation of the University as a centre for properly conducted, high quality research.

8.3. The University of Bristol is committed to ensuring that it acts at all times in accordance with the principles described in the Concordat to Support Research Integrity launched in July 2012 by Universities UK.

8.4. The Bristol Doctoral College (BDC) provides a focal point for doctoral training activity and researcher development across the University and in collaboration with their partner institutions. There are currently 26 PhD students in SVS and Bristol has one of the largest concentrations of funding for collaborative research training in the UK. This includes doctoral training grants from all UK Research Councils alongside EU funding and charitable organisations. The BDC offers integrated support for staff setting up and running doctoral training partnerships and centres.

8.5. The key external audit of the University’s research quality is the UK-wide Research Excellence Framework (REF) exercise that takes place every 6 years.

8.6. For more information about how research methods and results are conveyed into basic veterinary training, please see Section 1, Chapter 13.

Comments

8.7. Current RCVS requirements have been met. Refer to Chapter 13 – Research for further comments on this area.

Suggestions

8.8. None.

Recommendations

8.9. None.
Chapter 9 – Assessment of internationalisation of education and research

The institution should describe the system it possesses to promote and assess the development of international post-graduate education and of co-operating research projects with other countries, including developing countries.

Of particular importance is description of the measures of encouragement applied to engage veterinary students and new graduates in international mobility of training (e.g. EU programmes such as Erasmus, Socrates, Tempus, Marie Curie etc) as well as the effectiveness of the activities.

Findings

9.1. The University has prioritised internationalisation throughout all Schools in the institution. As an indicator of the University’s commitment to internationalisation, the post of Pro Vice-Chancellor (International) was created and filled one year ago. This has led to the development of a University wide International Strategy.

9.2. The delivery of this strategy is being supported by recently appointed Faculty International Directors (FIDs) working directly with the Pro Vice-Chancellor (International). One of the FIDs is a staff member from the School of Veterinary Sciences, placing the School in a strong position to work towards the University’s internationalisation agenda. The FIDs sit on the University International Committee and on Faculty Board along with the Head of School.

9.3. The School has a developing International Strategy under the leadership of the Head of School and the Faculty International Director that aligns with the University’s International Strategy priority areas. The School recognises that it has a particular responsibility to contribute to the development of veterinary education and science worldwide.

9.4. In respect to undergraduate education, students have the opportunity to undertake Extramural Study (EMS) placements outside the UK. Students are also encouraged to participate in student led activities, such as the International Veterinary Student’s Association (IVSA), that increase their awareness of international issues and give them experience of international collaborative working (the current UK IVSA representative is a Bristol student). Students are also supported by academics to take up opportunities that increase their exposure to international veterinary issues, for example this year two students obtained scholarships to attend the International Working Equine Colloquium, two students gain places on the intercalated Global Health BSc run in the Faculty of Medicine and Dentistry and for the past two years students from Bristol have benefitted from EU funding to attend public health seminars run as part of European Veterinary Week. Students have also been supported in skills development activities such as joining the Leadership Program for Veterinary Students run by Cornell University. The School has also hosted a visit of 60 undergraduate students from Utrecht University, Veterinary Cattle Breeders Club.

9.5. In respect to postgraduate education, the School’s taught MSc in Global Wildlife Health and Conservation has offered places to 24 and 32 students in its first and second years respectively. The 2014 student cohort of this taught MSc will include eight international students (excluding EU students). By encouraging
a diverse international student body, the School aims to create a wider international experience for all students both postgraduate and undergraduate.

9.6. The School has welcomed a number of international postgraduate research students and post-doctorate researchers who been funded through mobility grants such as Marie Curie Fellowships, Erasmus programmes and the EU funded AWARE programme which is specifically designed to encourage mobility in animal welfare researchers. Postgraduate and post-doctoral researchers from the School have also been successful in obtaining grants to allow them to attend international conferences and to visit research institutions around the world.

9.7. The School’s Clinical Training Scholarship programmes are open to international students, provided that they have the required level of proficiency (e.g. in Europe they must be graduates of EAEVE accredited institutions).

9.8. The University has also encouraged collaborative efforts in pursuit of its research goals, and international research collaborations are central to the School’s internationalism strategy with many research active academic staff involved in international research collaborations. For example, staff in the School have had recent success in building large collaborative research networks such as EUWelNet (an EU funded network of EU animal welfare researchers) and have been awarded a Global Innovations Initiative grant in sustainable livestock with partners in India, China and the USA, a Leverhulme Fellowship to conduct research in Africa, and British Council funding to develop and international network of Farm Platforms. A list of the School’s collaborative international research programmes was presented to the visitation team.

Comments

9.9. Current RCVS requirements have been met.

Suggestions

9.10. None.

Recommendations

9.11. None.
Chapter 10 – Assessment of cooperation with stakeholders and society

The institution should provide proof that it regularly publishes up to date, objective and accurate information, both quantitative and qualitative, about the study programme. Published information might also include the views and employment destinations of past students and the profile of current student population. This information should be readily accessible and should not be used simply as a marketing opportunity. The institution should describe to what extent it meets its own expectations.

Findings

10.1. The University as a whole, along with the School, publishes a series of prospectuses each year that provide prospective students with information about the programmes offered by SVS and the wider University. Information about the study programme is also provided in the form of Key Information Sets (KIS) which published through the Unistats (UK HE comparison) website and through widgets hosted on the prospectus.

10.2. The University data policy is overseen by the University Secretary’s Office, and ensures that it meets the requirements set out by the Freedom of Information Act. This also serves to ensure that all official documentation, such as the results of each School Review, is accessible from the University website.

10.3. The School maintains a highly active charitable organisation, The Langford Trust which raises money for clinical research and equipment and clinical facilities for the treatment and hospitalisation of animals. The Langford Trust reaches a wide audience throughout the Southwest and beyond but also has particular connection to the local community. Fund raising events such as the annual dog show and open day have been an effective way of involving the local community in the life of the Vet School. The University Campaigns and Alumni Office also actively engage in fund raising on behalf of the School.

10.4. In recent years the School has consulted a variety of stakeholders for part of the process of curriculum reform. This has included a comprehensive external review of farm animal teaching at Bristol by Professor John Bourne (hard copies available), an external review in 2010 of equine (by Professors Wayne McIlwraith, Barry Edwards and Renee Van Weeren) and another external review in 2010 of the University farm as a teaching resource (by Professor John Alliston, Dr Bob Moore and Mr Nick Green).

10.5. The External Examiners and other external stakeholders (employers, partners in research institutes and leading members of the Profession) have subsequently played a critical role in the review and revision of the BVSc curriculum and continue to play a central role in assessing teaching quality. This is both a Faculty level procedure as well as one set up by the School to assure the on-going development of the new curriculum. For example, as part of the development of the Professional Studies unit a number of veterinary practitioners were consulted and as it goes forward the School will ensure that stakeholders are engaged in providing feedback on the quality of its graduates.

Comments

10.6. Current RCVS requirements have been met.
Suggestions

10.7. None.

Recommendations

10.8. None.
Appendix 1: Main indicators of the European System of Evaluation of Veterinary Training

1: Based on Annex One. Supplement A – Ratios (www.eaeve.org/03.04.2014/)

2: No figures are given in Annex One. Supplement A – Ratios; however ratios of SVS Bristol are within the range published earlier by EAEVE.

3: Extramural veterinary inspection regarding veterinary public health is not in the curriculum, it is compensated by the work at the slaughter house of SVS.

4: Indicator R11 is below the minimum value but compensated well with R12.

5: Indicators calculated with number of graduates were recalculated since wrong figure was used in the SER. The right number of graduates is 98.4 (SER Table 9.4 Page 153).

Appendix 2 – Staffing List

School of Veterinary Sciences – Academic Staff

Professors

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor J Price</td>
<td>VS MRCVS</td>
<td>Professor of Veterinary Sciences, Head of School</td>
</tr>
<tr>
<td>Professor E Hall</td>
<td>VS MRCVS</td>
<td>Professor, Deputy Head of School</td>
</tr>
<tr>
<td>Professor M Bailey</td>
<td>VS MRCVS</td>
<td>Professor of Comparative Immunology</td>
</tr>
<tr>
<td>Professor S Saillie</td>
<td>VS MRCVS</td>
<td>Chair in Veterinary Education</td>
</tr>
<tr>
<td>Professor A Barr</td>
<td>VS MRCVS</td>
<td>Professor of Veterinary Surgery</td>
</tr>
<tr>
<td>Professor D Barrett</td>
<td>VS MRCVS</td>
<td>Professor of Bovine Medicine</td>
</tr>
<tr>
<td>Professor M Day</td>
<td>VS FRCVS</td>
<td>Professor of Veterinary Pathology</td>
</tr>
<tr>
<td>Professor M Eisler</td>
<td>VS MRCVS</td>
<td>Chair in Global Farm Animal Health</td>
</tr>
<tr>
<td>Professor R Hammond</td>
<td>VS MRCVS</td>
<td>Chair in Clinical Veterinary Science</td>
</tr>
<tr>
<td>Professor T Knowles</td>
<td></td>
<td>Professor of Farm and Food Science</td>
</tr>
<tr>
<td>Professor S Langley-Hobbs</td>
<td>VS MRCVS</td>
<td>Chair in Small Animal Orthopaedic Surgery</td>
</tr>
<tr>
<td>Professor D Main</td>
<td>VS MRCVS</td>
<td>Professor of Animal Welfare &amp; Behaviour</td>
</tr>
<tr>
<td>Professor M Mendil</td>
<td></td>
<td>Professor of Animal Behaviour and Welfare</td>
</tr>
<tr>
<td>Professor C Nicol</td>
<td></td>
<td>Professor of Animal Welfare</td>
</tr>
<tr>
<td>Professor C Stokes</td>
<td></td>
<td>Professor of Mucosal Immunology</td>
</tr>
<tr>
<td>Professor L Wooldridge</td>
<td>VS MRCVS</td>
<td>Chair in Translational Immunology</td>
</tr>
</tbody>
</table>

Readers

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr J Corry</td>
<td>Reader in Research – Food Microbiology</td>
</tr>
<tr>
<td>Dr M Lee</td>
<td>Reader in Sustainable Livestock and Food Security</td>
</tr>
<tr>
<td>Dr S Tasker</td>
<td>Reader in Medicine</td>
</tr>
</tbody>
</table>

Senior Lecturers

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr K Allen</td>
<td>Senior Lecturer in Equine Sports Medicine</td>
</tr>
<tr>
<td>Dr A Butterworth</td>
<td>Senior Lecturer in Animal Sciences</td>
</tr>
<tr>
<td>Dr R Casey</td>
<td>Senior Lecturer in SA Behaviour</td>
</tr>
<tr>
<td>Dr G Chanoit</td>
<td>Senior Lecturer in Small Animal Surgery</td>
</tr>
<tr>
<td>Dr S Fonfara</td>
<td>Senior Lecturer in Small Animal Cardiorespiratory Medicine</td>
</tr>
<tr>
<td>Dr A Foster</td>
<td>Senior Lecturer in Dermatology</td>
</tr>
<tr>
<td>Dr N Granger</td>
<td>Senior Lecturer in Veterinary Neurology</td>
</tr>
<tr>
<td>Dr R Grogono-Thomas</td>
<td>Senior Lecturer in Farm Animal Science</td>
</tr>
<tr>
<td>Dr R Harley</td>
<td>Senior Lecturer in Veterinary Pathology</td>
</tr>
<tr>
<td>Dr S Held</td>
<td>Senior Lecturer in Animal Science</td>
</tr>
<tr>
<td>Dr E Morgan</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Dr J Murrell</td>
<td>Senior Lecturer in Veterinary Anaesthesia</td>
</tr>
<tr>
<td>Dr K Papasouliotis</td>
<td>Senior Lecturer in Veterinary Clinical Pathology</td>
</tr>
</tbody>
</table>
Dr K Reyher VS MRCVS Senior Lecturer in Farm Animal Science
Dr I Richardson Senior Lecturer in Animal Sciences
Dr M Tivers VS MRCVS Senior Lecturer in Small Animal Surgery
Dr K Turner Senior Lecturer
Dr E Van Klink VS MRCVS Senior Lecturer in Veterinary Public Health
Dr H Van Oostrom VS MRCVS Senior Lecturer in Veterinary Anaesthesia
Dr H Whay Senior Lecturer in Animal Welfare and Behaviour
Dr S Wotton Senior Lecturer in Food Animal Science

Senior Research Fellows
Dr A Butterworth VS MRCVS Senior Research Fellow
Professor L Lanyon VS HonFRCVS Senior Research Fellow
Dr E S Paul Senior Research Fellow
Dr I Richardson Senior Lecturer in Animal Sciences
Dr J Tarlton Senior Research Fellow
Dr C A Weeks Senior Research Fellow in Animal Welfare

Senior Teaching/Clinical Fellows
Dr K Bradley VS MRCVS Senior Clinical Fellow
Dr H Brooks Brownlie VS MRCVS Senior Teaching Fellow (Pathology)
Ms E Busschers VS MRCVS Senior Teaching Fellow
Dr D Holopherne-Doran VS MRCVS Senior Teaching Fellow Anaesthesia
Mrs A Jeffery Senior Teaching Fellow
Dr A Kennedy Senior Teaching Fellow and Director of Taught Post Graduate Programmes
Dr E Love VS MRCVS Senior Clinical Fellow
Miss V Roberts VS MRCVS Senior Clinical Fellow in Equine Medicine
Mr W Tremaine VS MRCVS Senior Teaching Fellow in Equine Surgery
Mrs S Warman VS MRCVS Senior Clinical Fellow in Small Animal Medicine

Lecturers
Dr E-J Blackwell Dogs Trust Lecturer in Canine Behaviour and Welfare
Dr T Cogan Lecturer in Infectious Diseases
Dr A Hayman Lecturer in Connective Tissue Biology
Dr A Wilson VS MRCVS Lecturer in Veterinary Virology

Research Fellows
Mr N Avery Research Fellow
Dr S Mullan VS MRCVS Research Fellow
Dr J Murray Research Fellow
Dr N Rooney Research Fellow
Dr S Windahl Research Fellow

Teaching/Clinical Fellows
Dr V Barberet VS MRCVS Teaching Fellow
Dr A Blaxter VS MRCVS Clinical Teaching Fellow
Ms M Barrows VS MRCVS Exotics Teaching Fellow
Mrs A Coates Teaching Fellow
Mrs A Chanoit VS MRCVS Teaching Fellow in Veterinary Ophthalmology
Mrs D Fews VS MRCVS Clinical fellow
Mrs A Hammond VS MRCVS Teaching Fellow in Equine Practice
Ms N Hetzel VS MRCVS Clinical Teaching Fellow in Small Animal Medicine
Ms R Hyde VS MRCVS Clinical Teaching Fellow
Mrs J Macfarlane VS MRCVS Clinical Teaching Fellow in Farm Animal Science
Mr J Mackinder VS MRCVS Clinical Teaching Fellow
Mrs J Mason VS MRCVS Clinical Fellow in Equine First Opinion Practice
Miss C Maunder VS MRCVS Clinical Fellow in Veterinary Clinical Pathology
Dr P Sheard Teaching Fellow in Meat Science
Dr L Slingsby VS MRCVS Teaching Fellow, SVS Admissions Tutor
Mr D Tisdall VS MRCVS Clinical Teaching Fellow in Farm Animal Science
Miss S Wills VS MRCVS Teaching Fellow in Feline Medicine
Mrs S Wood VS MRCVS Teaching Fellow in Farm Animal Practice

Research Associates
Mrs M Geiger Research Associate
Mrs C Hayes Research Associate
Dr J Hockenhull Research Associate
Dr S Lambton Research Associate
Dr L Meakin VS MRCVS Research Associate
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs T Jarvis</td>
<td>UG Student Administrator</td>
</tr>
<tr>
<td>Mr R Wan</td>
<td>UG Student Administrator (CCCA)</td>
</tr>
<tr>
<td>Dr M Blackburn</td>
<td>EMS/UG Student Administrator (CCCA)</td>
</tr>
<tr>
<td>Mrs J Robinson</td>
<td>EMS Student Administrator</td>
</tr>
<tr>
<td>Ms C Nikou</td>
<td>EMS Student Administrator</td>
</tr>
<tr>
<td>Ms C Ashby</td>
<td>EMS Student Administrator</td>
</tr>
<tr>
<td>Mrs N Minton</td>
<td>PG Administrator</td>
</tr>
<tr>
<td>Mrs J Chambers</td>
<td>PG Administrator</td>
</tr>
</tbody>
</table>

### Langford Veterinary Services – Academic Staff that teach on the Veterinary Programme

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss S Adamantos</td>
<td>VS MRCVS Emergency &amp; Critical care specialist</td>
</tr>
<tr>
<td>Mr J Allsop</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Dr S Annies</td>
<td>VS MRCVS Veterinary Surgeon (Cardiff)</td>
</tr>
<tr>
<td>Miss N Barnard</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Mr N Burton</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Mr D Casamian-Sorrosal</td>
<td>VS MRCVS Cardiologist</td>
</tr>
<tr>
<td>Mrs G Covey-Crump</td>
<td>VS MRCVS Veterinary Anaesthetist</td>
</tr>
<tr>
<td>Miss S Das</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Mr I Doran</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Mr T Harcourt-Brown</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Miss A Hibbert</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Mr P Macfarlane</td>
<td>VS MRCVS Clinical Anaesthetist</td>
</tr>
<tr>
<td>Dr K Parsons</td>
<td>VS MRCVS Veterinary Surgeon</td>
</tr>
<tr>
<td>Ms K Tennant</td>
<td>VS MRCVS Veterinary Pathologist</td>
</tr>
<tr>
<td>Mr C Warren-Smith</td>
<td>VS MRCVS Diagnostic Imager</td>
</tr>
</tbody>
</table>

### Langford Veterinary Services – Research Staff

Dr C Helps – Senior Research Fellow

### Langford Veterinary Services – Animal Care Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs J Webber</td>
<td>Head Equine Veterinary Nurse</td>
</tr>
<tr>
<td>Mrs D Leggo</td>
<td>Head Veterinary Nurse - Small Animal Practice</td>
</tr>
<tr>
<td>Mrs L Green</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Miss K Jones</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Miss T Labiak</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Miss H Mayyear</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Miss J Noble</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Miss J Norris</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Mr P Rice</td>
<td>Animal Care Assistant</td>
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<tr>
<td>Miss L Turner</td>
<td>Animal Care Assistant</td>
</tr>
<tr>
<td>Miss S Constable</td>
<td>Equine Groom</td>
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<tr>
<td>Miss H Fletcher</td>
<td>Equine Groom</td>
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<tr>
<td>Mrs C Smith</td>
<td>Equine Groom</td>
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<tr>
<td>Mrs J Taverner</td>
<td>Equine Groom</td>
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<tr>
<td>Miss T Bettiss</td>
<td>Night Veterinary Nurse</td>
</tr>
<tr>
<td>Miss S Jonas</td>
<td>Night Veterinary Nurse</td>
</tr>
<tr>
<td>Mrs K Jones</td>
<td>Senior Medicine Nurse</td>
</tr>
<tr>
<td>Miss R Jones</td>
<td>Senior Surgical Nurse</td>
</tr>
<tr>
<td>Miss L Nutt</td>
<td>Theatre Nurse</td>
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<tr>
<td>Miss S Rudge</td>
<td>Trainee Veterinary Nurse</td>
</tr>
<tr>
<td>Miss A Allbrook</td>
<td>Veterinary Nurse</td>
</tr>
<tr>
<td>Miss H Binge</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Mrs Y Bradley</td>
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<td>Mrs S Brown</td>
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<td>Miss F Campbell</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss E Covey</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss A Duff</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss J Durbin</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss D Ford</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss S Gosden</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Mrs J Boyd</td>
<td>Veterinary Nurse</td>
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<td>Miss C Havard</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss G Hewlett</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss E Ingram</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss E Jones</td>
<td>Veterinary Nurse</td>
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<tr>
<td>Miss H Kilbane</td>
<td>Veterinary Nurse</td>
</tr>
<tr>
<td>Mrs C Kilby</td>
<td>Veterinary Nurse</td>
</tr>
<tr>
<td>Mrs S Lindsey</td>
<td>Veterinary Nurse</td>
</tr>
</tbody>
</table>
Miss S Loveridge   Veterinary Nurse
Miss A Mann   Veterinary Nurse
Miss N McIndoe   Veterinary Nurse
Mrs J Grabski   Veterinary Nurse
Miss S Daniels   Veterinary Nurse
Miss R P Queen-Jones   Veterinary Nurse
Miss Richards   Veterinary Nurse
Miss S Rudd   Veterinary Nurse
Mr T Smith   Veterinary Nurse
Miss A Webster   Veterinary Nurse
Miss H Witchell   Veterinary Nurse
Miss B Wrate   Veterinary Nurse
Miss N Bates   Veterinary Nurse (Cardiff)
Mrs A Pitt   Veterinary Nurse (Cover)
Miss K Bevis   Veterinary Nurse (Cover)
Mrs V Ford-Fennah   Veterinary Nurse
Miss L Crane   Veterinary Nurse

Langford Veterinary Services – Practical and Clinical Support Staff
Mrs K Burt   Biochemistry Technician
Mrs E Crawford   Haematology Technician
Mr S Cue   Haematology Technician
Ms Williams   Haematology Technician
Ms E Jones   Histology Technician
Mrs P G Needham   Histology Technician
Mrs A Sugg   Hospital Technician
Mrs S Mitchell   Lab Technician
Mr D Morris   Lab Technician
Mrs D Patel   Lab Technician
Miss K Jupp   Microbiology Clinical Pathology Technician
Mrs E Jones   Microbiology Technician
Mrs C Clarke   Microbiology Technician
Miss S English   Molecular Diagnostic Technician
Mrs K Downes   Molecular Technician
Dr M Ellis   Molecular Technician
Ms E Carthey   Radiographer
Miss A Moor   Radiographer
Mrs A Edgell   Stock Control Technician
Mrs M T Costa VS MRCVS   Veterinary Clinical Pathologist
Mrs P Howard   Virology Technician

Langford Veterinary Services – Support Staff
Mrs L Hill   Chief Executive Officer
Miss S Monks   Divisional Manager
Mrs S White   Divisional Manager (Farm Animal Practice)
Mrs L Bryne   Divisional Manager (SAH)
Mr A Jarecki   Divisional Manager, Diagnostic Labs
Ms H Jenkins   Divisional Manager, Equine Centre
Mrs J Greer   Marketing Manager
Mr C Warren-Smith   Business Development Manager
Mrs D Andrews   Assistant Accountant
Mrs K Jones   Cleaner
Miss A Saul   Cleaner
Ms H Boucher   Credit Controller
Mrs L Pike   Customer Care Team Leader
Mrs P Bond   Diagnostic Labs Receptionist
Dr R Brookes   Finance Controller
Mrs E Green   Financial Controller
Mr B Millard   Health & Safety Officer
Mrs E Dunn   Insurance & Credit Control Clerk
Ms H Prosser   Insurance & Credit Control Clerk
Mrs K Turner   PA to Chief Executive
Mrs J Hounsell   Purchase Ledger Clerk
Mrs C Sheppard   Purchase Ledger Clerk
Mrs R Giles   Purchasing Officer
Mrs S Elliott   Receptionist
Mrs D Fitch   Receptionist
Mrs B Heal   Receptionist
Mrs G Hoskins  Receptionist
Miss S Manley  Receptionist
Miss A Martindale  Receptionist
Mrs E Shuker  Receptionist
Miss E Thorneywork  Receptionist
Mrs L Thorneywork  Receptionist
Mrs H Tripp  Receptionist
Miss L Apps  SAH Receptionist

Centre for Comparative and Clinical Anatomy – Academic Staff that teach on the Veterinary programme

Professor A Goodship VS MRCVS Chair and Head of the Centre for Comparative and Clinical Anatomy
Mr P Delisser VS MRCVS Teaching Fellow
Dr C Fuller VS MRCVS Reader in Anatomy
Dr J McNamara Teaching Fellow
Dr D Tortoneese Senior Lecturer in Anatomy
Dr J Townsend Senior Teaching Fellow
Dr G Wakley Senior Teaching Fellow

Technical Service Staff – CCCA

Mrs C Davies Deputy Teaching Services Manager
Mr T Cornwall Senior Laboratory Technician
Mr C Tugwell Animal Technician & Teaching Laboratory Technician
Miss A Halliday Teaching Laboratory Technician
Mr R Harraway Teaching Laboratory Technician
Mr C Tanner Teaching Laboratory Technician
Miss I Muirhead Teaching Laboratory Technician
Vacant Prosector
Vacant Teaching Laboratory Technician

School of Physiology and Pharmacology – Academic Staff that teach on the Veterinary programme

Dr N Balthasar Reader in Neuroscience
Professor M Headley Professor of Physiology
Professor G Henderson Professor of Pharmacology
Dr R Helyer Senior Teaching Fellow
Dr P Langton Senior Teaching Fellow in Physiology and Director of Education Innovation
Dr F MacMillan Senior Teaching Fellow
Professor N Marrion Professor of Neuroscience
Dr S Mundell Reader in Pharmacology

School of Biochemistry – Academic Staff that teach on the Veterinary programme

Dr K Gaston Reader in Biochemistry
Professor H Mellor Professor of Biochemistry
Dr K Moule Senior Teaching Fellow
Professor N Savery Professor of Biochemistry

External Examiners

Dr D Bainbridge University Clinical Veterinary Anatomist
Mrs K Bazeley Farm Animal Veterinary Surgeon
Ms C Buczka Senior Lecturer
Dr J Chantrey Senior Lecturer in Zoo and Wild Animal Pathology
Dr H Elsheikha Lecturer in Veterinary Parasitology
Professor A Dowden Professor of Perinatal Physiology
Dr A French Senior University Veterinary Clinician in Veterinary Cardiology
Ms C Gray Programme Director; MSc Applied Animal Behaviour and Welfare
Dr S Jarvis University Veterinary Public Health
Mrs N Paul Veterinary Surgeon
Professor G Pettigrew Personal Chair in Biogenetics
Dr A Radford Undergraduate and postgraduate virology
Dr S Prankel Senior Lecturer
Professor S Rhind Director of Veterinary Teaching Organisation
Ms A Ridyard Senior Lecturer in Small Animal Internal Medicine
Professor J Slater Professor in Equine Clinical Studies
Miss J Whatley Lecturer in Veterinary Nursing
Professor CJ Wheeler-Jones Professor of Vascular Cell Biology

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Ms C Gray Programme Director; MSc Applied Animal Behaviour and Welfare
Dr S Jarvis University Veterinary Public Health
Mrs N Paul Veterinary Surgeon
Professor G Pettigrew Personal Chair in Biogenetics
Dr A Radford Undergraduate and postgraduate virology
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Ms A Ridyard Senior Lecturer in Small Animal Internal Medicine
Professor J Slater Professor in Equine Clinical Studies
Miss J Whatley Lecturer in Veterinary Nursing
Professor CJ Wheeler-Jones Professor of Vascular Cell Biology
Appendix 3 – BVSc Final year structure

Appendix 4 – University locations used by SVS
Appendix 5 -
Timetable for the RCVS/EAEVE visit to the University of Bristol, School of Veterinary Sciences, November 2014.

Friday 21st November 2014
10.00  Susan Dawson and David Black to visit the RSPCA in Manchester.
   To be met there by Mrs S Warman and Dr R Hammond

Sunday 23rd November 2014
15.00  Cadbury House Hotel – Visitors arrive.
   To be met there by Professor Ed Hall
16.00 – 18.00  Cadbury House Hotel – Private meeting.
19.00  Cadbury House Hotel – Dinner.

Monday 24th November 2014
All meetings with staff to take place in the Chancellor’s Room, Hawthorns, unless otherwise stated.

07.30  Cadbury House Hotel – Visitors depart and travel to Bristol.
08.30 – 09.00  Coffee, welcome and introductions to the SVS Senior Management Team.
09.00 – 09.30  Organisation of School. [Chapter – Organisation]
Dean, Head of School, Senior Management Team and Faculty Manager
09.30 – 10.00  Brief introduction to Curriculum. [Chapter – Curriculum]
10.00 – 11.45  Walk from Hawthorns to Southwell Street. Coffee upon arrival in Tutorial Room 1&2 followed by Tour – Dissection Room and Museum and Live Anatomy Barn. [Chapter – Facilities]
11.45 – 12.15  Return to Hawthorns via Life Sciences Building.
12.15 – 13.00  Curriculum - BVSc Years 1 & 2. [Chapter – Teaching and Curriculum]
13.00 – 14.00  Lunch with Years 1 & 2 students (selected by Centaur Society)
14.00 – 15.00  Tour of Medical School (teaching labs etc) and central Libraries. [Chapter – Facilities and Library/Learning Resources]
15.00 – 15.45  Return to the Hawthorns for a break and team discussion.
15.45 – 16.15  Teaching Quality and Outcomes Assessment.
16.15 – 17.30 Administration, Facilities and Finance. [Chapter – Organisation, Finance and Facilities]
This session will be attended throughout by the Dean, the Head of School, the Faculty Manager and the School Manager. The Registrar will attend for the first 30 minutes (16.15 – 16.45). At 16.45 she will leave and the Finance session will start: the panel will be joined by the University Finance Director and the Faculty Deputy Finance Controller.

16.45 – 17.30 Finances. [Chapter – Organisation and Finance]

17.30 Return to Cadbury House Hotel.

19.00 – 20.00 Private meeting.

20.00 Cadbury House Hotel – Dinner with meeting afterwards, if required.

**Tuesday 25th November 2014**

*All meetings with staff to take place in the Committee Room, Langford House, unless otherwise stated*

07.30 Cadbury House Hotel – Depart for Langford.

08.00 Meeting with Head of School (if required).

08.00 – 09.00 Visit abattoir. [Chapter – Facilities and Animals/Teaching material of Animal Origin]

09.00 – 10.30 Tour of Farm and then Farm Animal Practice upon return. [Chapter – Facilities and Animals/Teaching material of Animal Origin]

10.30 – 11.00 Coffee and team discussion.
*L Hill to join at 10.50 for introduction to LVS facilities*

11.00 – 13.00 Tour of small animal hospital, small animal practice and equine hospital. [Chapter – Facilities and Teaching]

13.00 – 14.00 Lunch with students in the Communal Building.

14.00 – 15.30 Tour of Teaching Facilities, PM Rooms, Clinical Skills Lab, Student Facilities. [Chapter – Facilities, Teaching and Student Welfare]

15.30 – 16.00 Break and team discussion.

16.00 – 17.00 Curriculum (II). [Chapter – Curriculum]

Evening Dinner hosted by School (Swan at Wedmore).

**Wednesday 26th November 2014**

*All meetings with staff to take place in the Committee Room, Langford House, unless otherwise noted*

08.00 Cadbury House Hotel – Depart for Langford.
08.30 Meeting with Head of School (if required).

08.45 – 09.45 Curriculum – Animal Disease Themes: Veterinary Public Health, Pathology and Paraclinical. [Chapter – Teaching and Curriculum]

09.45 – 10.15 Post graduate research training. [Chapter – Postgraduate Education]

10.15 – 10.45 Break and group discussion.

10.45 – 11.00 Tour of Dolberry Building and Student Administration. [Chapter – Facilities and Support Staff]

11.00 – 11.45 Administration of Programme (to be held within the Dolberry Seminar Room). [Chapter – Support Staff]

11.45 – 12.15 Admissions (includes representation from Central Admissions Team). [Chapter – Admission and Enrolment]

12.15 – 13.00 Student Support and Fitness to Practise. [Chapter – Student Welfare]

13.00 – 14.00 Lunch with students in the Main Dining Hall, Communal Building.

14.00 – 15.30 BVSc 5 – Clinical teaching. [Chapter – Teaching and Curriculum]

15.30 – 16.00 Coffee and team discussion.

16.00 – 17.00 Dolberry Seminar Room – Meeting with alumni, EMS providers and employers.

17.30 – 18.30 Cadbury House Hotel – Private meeting.

19.30 Cadbury House Hotel – Dinner with meeting afterwards.

Thursday 27th November 2014

All meetings with staff to take place in the Committee Room, Langford House, unless otherwise noted

07.00 Groups depart for Distributed Teaching Practices (Shepton, PDSA Bristol, Delaware) and Cannington. [Chapter – Curriculum and Teaching]

11.00 – 12.00 Groups re-convene and coffee and meet with Head of School if required.

12.00 – 12.30 Research (as it relates to BVSc undergraduate teaching). [Chapter – Research and Teaching]

12.30 – 13.00 Post-graduate training and CPD. [Chapter – Postgraduate and Continuing Education]

13.00 – 14.00 Lunch with Clinical Training Scholars and PhD students in the Communal Building.

14.00 – 15.00 Confidential meetings with students and staff.

Afternoon Committee room – private meeting and report writing

19.30 Cadbury House Hotel – Dinner with meeting afterwards.
Friday 28th November 2014

All meeting with staff to take place in the Chancellor’s Room, Hawthorns, unless otherwise noted.

08.45 Cadbury House Hotel – Depart and travel to Bristol

09.45 – 10.00 Coffee, joined by Dean and Head of School

10.00 – 10.30 Senate House – Meeting with VC and Deputy VC

10.30 – 11.00 Visitors depart

List of RCVS/EAEVE Visitors

Visitors

- **Professor Susan Dawson** – Head of School of Veterinary Science, University of Liverpool (Chairman)
- **Mr David Black** – Practitioner, Paragon Veterinary Group, Cumbria
- **Professor Malcolm Cobb** – School of Veterinary Medicine and Science, University of Nottingham
- **Professor Laszlo Fodor** – Faculty of Veterinary Science, Budapest, Szent Istvan University (nominated by EAEVE)
- **Professor Dr. Kurt Houf** – Department of Veterinary Public Health and Food Safety, University of Ghent (nominated by EAEVE)
- **Professor Dr. Asger Lundorff Jensen** – Head of Department of Veterinary Clinical and Animal Sciences, University of Copenhagen (nominated by EAEVE)
- **Professor Norman Williamson** – Australasian Veterinary Boards Council (AVBC), Massey University, New Zealand
- **Mrs Adelle Bowden** – Student visitor

Observers

- **Professor David Argyle** – Head of School of Veterinary Studies, University of Edinburgh
- **Dr Danie Odendaal** – South African Veterinary Council (SAVC)

Also present

- **Mrs Freda Andrews** – Director of Education, RCVS
- **Mrs Chris Warman** – Head of Education, RCVS
University of Bristol’s Response to the
RCVS and EAEVE Visitation Report

24 – 28 November 2014

Response to report to the Royal College of Veterinary Surgeons (RCVS) in accordance with Section 5 of the Veterinary Surgeons Act 1966,

and

to the European Committee on Veterinary Education (ECOVE) in compliance with European Directive 2005/36/EC

The University is grateful to the RCVS Visitors for their Commendations.

Response to recommendations

The University’s responses to the Visitors’ recommendations are detailed below.

1. The University and Faculty should continue the support to the School to ensure sustainability and implementation of the new curriculum and the increased undergraduate numbers projects.
   Please see response to Points 2, 3 and 4.

2. The Faculty must approve and implement the business case for additional student numbers (HUG project) as provided by the School. This project has commenced in September 2014 with an increased intake to the veterinary programme of 150 students. It is therefore essential that the Faculty commits the funds to appoint the posts required by this project and secures available funds for the non-salary spend to allow sufficient resources to be available for each year of the programme as the additional students progress through the course.

   The University, at senior and Faculty level, recognises the importance of providing the resource necessary to teach the increased student numbers detailed in the Home Undergraduate (HUG) business plan and for implementation of the new curriculum.

   The current Faculty (Faculty of Medical and Veterinary Sciences) has agreed to provide an extra 0.5 FTE for student administration and two technicians, one in the Centre for Comparative and Clinical Anatomy (CCCA) and one in the School of Veterinary Sciences (SVS).
From August 1st 2015 allocation of resources to the Veterinary School will be the responsibility of the Faculty of Health Sciences. Two new clinical HUG posts will be included in the School’s budget for 2015-2016. Implementation of the HUG business plan also requires the appointment of another technician in SVS and an increase in non-salary budget (for transport, consumables etc.). The request for this extra resource is currently being considered as part of the budgetary process.

However, the Faculty has asked SVS to consider how it may make savings by further increasing its income, or reducing its expenditure, (over and above the increased income generated from the HUG project). Increasing its income is problematic because the School has limited opportunity to increase income from commercial activities (most are now managed by Langford Veterinary Services). Implementation of HUG will therefore need to be accompanied by significant disinvestment in other areas. This will include BVSc student projects (see point 4) and a freeze on recruitment to a number of strategically important Pathway 1 posts (including a chair in Evidence Based Veterinary Medicine and a chair in Veterinary Infectious Diseases).

Extra clinical posts to support clinical teaching could be provided from extra income generated by Langford Veterinary Services (LVS), but agreement on this has not yet been achieved and is awaiting discussions on the LVS business plan/proposed budgets.

3. **The Faculty must approve the additional funds required for implementation of the new curriculum. A cohesive business case was not produced for the Faculty prior to the start of the new curriculum and some resources have already been provided to cover the needs of years 1 and 2 of the new programme. However, the detail of years 3 and 4 of the new curriculum are currently being finalised and this will commence in the autumn of 2015. This means there is an urgent need for the funds to be released to enable required resources to be in place in a timely fashion.**

In 2015-2016 the School will be allocated extra teaching income by the Faculty in recognition that for the past two years it has been delivering significant extra teaching in Years 1 and 2 of the new curriculum (which started in 2013). The School will also receive extra income for its increased share of BVSc teaching in Year 3 (starts in 2015), but not until 2016-2017. These increases notwithstanding, the Faculty’s current financial targets mean that the School will not have the resource to support undergraduate research projects (see point 4).

As described under point 2, the School has requested two new clinical academic posts to be appointed in 2015-2016 as part of the HUG project and these academics will help support final year teaching on the new curriculum (in dermatology and companion animal medicine).
The School has also requested an increase in the non-salary budget to support improvements in farm animal rotation teaching, professional studies, academic staff development and CPD provision. The School has also requested a permanent part-time position to support Assessment. These requests are under consideration.

4. A business case was provided for reintroduction of research projects to years 3 and 4 of the new curriculum with associated costs and there is significant buy-in from staff across the Faculty for these research projects. As the research projects will commence for year 3 undergraduates in the 2015-16 academic year it is recommended that resources are approved and implemented urgently to avoid delay in timetabling of the programme.

The constraints in funding implicit in the Faculty of Health Science’s budget forecasts mean that there is insufficient resource to re-introduce projects without this having a significant negative impact on other key areas of the School’s activities.

However, the School remains committed to ensuring that research informs the new BVSc curriculum and will prioritise the re-introduction of research projects when adequate resource becomes available.

To ensure that all students gain experience of Research Methodology in Year 3 the School will re-introduce the grant writing project that was part of the old curriculum. In Year 4 students will undertake knowledge summaries (currently undertaken in Year 5).

The School will also ask the University to consider whether it may use unrestricted reserves to fund a number of vacation studentships each year. In addition, the School will continue to encourage Bristol students to intercalate and will support participation in the Cornell leadership programme. As detailed in the Self Evaluation Report, the School has also applied for funding from the Inspire project being run by the Academy of Medical Sciences.

5. Curriculum mapping software should be implemented as soon as is possible to allow interrogation of the curriculum to ensure topic coverage, outcome coverage and assistance in blueprinting examinations and assuring alignment of teaching and assessment.

A project is underway (started in February 2015) with the Technology Enhanced Learning (TEL) teams from the central University and the Faculty of Health Sciences to identify the most suitable curriculum mapping software for all three professional programmes as well as the wider University. It is anticipated that software will be selected and available for piloting by the BVSc in 2015-16, followed by roll out across the programme in 2016-17.

6. The School must provide some education on veterinary certification and report writing as
part of its professional skills teaching.

The information available on veterinary certification has been reviewed and the learning resources have been updated and extended, including lecture notes and supporting materials uploaded to Blackboard.

7. **Adherence to biosecurity protocols in the small animal hospital and ambulatory vehicles must be enforced for staff and students.**

The Chief Executive of LVS, working alongside the School’s Health and Safety team, have reviewed LVS biosecurity policies and put in place measures to ensure better enforcement of biosecurity protocols. These include:

- Vehicle/equipment cleaning and safety check protocols to be enforced to ensure compliance.
- Secure bulkhead now fitted to the Farm Animal Practice van.
- Guard fitted to estate car vehicles to prevent forward movement of equipment.
- Reinforcement of the communication that scrubs are LVS uniform and Personal Protective Equipment is donned over uniform and removed before leaving the working area.
- Reinforcement of the policy regarding clothing to be worn under scrubs and the “bare below the elbow” policy.
- Supervisors reminded to observe staff/student dress code to ensure LVS protocol compliance

8. **A barrier must be fitted to the ambulatory van to ensure that luggage cannot enter the passenger compartment in the event of sudden deceleration.**

This has been done.

**Suggestions**

The following suggestions are drawn from the chapters of the report and the School will be pleased to provide an update on progress at the time of the re-visit. Preliminary responses are detailed below.

- **Within the new curriculum, aspects of the integrated learning programme could be made more explicit, for example in major areas such as Public Health and Epidemiology.**

  The School will ensure that this granularity is provided as part of ongoing curriculum review. Once the curriculum mapping software becomes available identification of themes and
areas will be easier to demonstrate, including Public Health and Epidemiology. The new curriculum also has Vertical Themes and a document is being produced that lists learning outcomes, teaching activities and assessments and will be available via Blackboard. Themes include Veterinary Public Health, Evidence Based Veterinary Medicine and Clinical and Practical Skills.

- **Given the difficulty in accessing pig herds, the Clinical Skills Facility would benefit from a model to train students in blood sampling in pigs.**

  Professor Baillie has made a life-size pig blood sampling model with assistance and equipment from a local pig practice. The instruction booklet is being finalised and the model will be available to students in the clinical skills lab shortly.

- **Consideration should be given to having more pigs available at Cannington, for example a group of farrowing sows, as well as trying to provide access to a small poultry flock for both animal handling and clinical experience.**

  The School has already opened up discussions with Cannington about enhancing access to pigs and is exploring the option of using other local pig farms. The Animal Welfare Group at Bristol has well established links with a number of local poultry farms and we will look into the possibility of students having access to these Facilities. However, it has to be acknowledged that biosecurity concerns may make it difficult to get large numbers of students onto such units regularly. We do encourage students to visit commercial pig and/or poultry units during EMS and are also looking at increasing visits to such farms during the final year farm animal elective.

- **As student numbers increase, consideration should be given to increasing the numbers of live animals or increasing the number of classes in the live animal barn, given the potential welfare implications for the limited number available of some species.**

  CCCA will need to consider how they can increase the number of animals and the number of classes in the barn. It is critical that animal welfare is not compromised because of funding and/or space constraints.

- **There is limited in-clinic exposure to exotic species that are only seen in the one week first opinion small animal practice rotation with some seen in the charity clinics. Given their increasing popularity, the School could consider ways to increase exposure to a traditional primary care exotic species caseload.**

  Bristol Zoo is seeking to open a first opinion exotics clinic linked to its new Hospital facility at the Cribbs causeway site on the edge of Bristol. The long-term aspiration is for Bristol Vet Students to rotate through their first opinion clinic in both track and elective rotations. In the meantime we will work with vets at the Zoo to explore whether there are options in
the short-term to increase students’ exposure to primary care exotic species.

• **Additional staff from external teaching providers could usefully be encouraged to undertake training in teaching and assessment, which could be run on site by the School.**

The University agrees and will ensure that all external teachers are trained in teaching and assessment and will encourage participation in the courses currently available at Langford. The School has requested an increase in its staff development budget for 2015-2016 to ensure that this can be actioned. This is being considered by the Faculty.

• **There is currently very little evidence of exposure to pigs and commercial poultry/egg production. This is an area where additional teaching, in particular herd/flock visits, might be considered.**

Farm Animal Teaching in the final year is currently being reviewed by the School and how they teach production animal health is a particular focus. While the main species used in the teaching of population medicine will always be cattle, the School also recognises the importance of pig and poultry production and is taking steps to further improve teaching in these areas. For example, from 2015-16 pig medicine will no longer be taught by a visiting lecturer. The increasingly specialist nature of commercial pig and poultry veterinary medicine mean some aspects of this teaching, and some farm visits, are confined to the final year farm animal elective. The School has a vacant Pathway One academic position in Population Health and although the position is currently “frozen” in order for the School to meet its financial targets, in future it may be possible to appoint a specialist with expertise in non-ruminant species.

• **The School should consider including supplementary extramural visits to high throughput abattoir facilities in order to enable students to observe real processing speed and the need for rapid decision making by the OV.**

The VPH teaching team in SVS have been asked to look at ways of implementing this suggestion.

• **Monitor adherence to newly-established timelines for ensuring prompt and timely release of examination papers to external examiners.**

This will be a priority for the student administration team in SVS supported by the Faculty of Health Science’s Education Manager.

• **The School is encouraged to strengthen processes for student evaluation of teaching and make discussion of the results a part of the annual performance review for staff. However, it was noted that, in other contexts, the collection and action on student feedback is currently...**
extensive and care will be needed not to induce ‘feedback fatigue’ within the student body by asking for too much feedback too frequently.

The University agrees that this is important and is seeking to standardise its processes on student evaluation of teaching based on examples of best practice.

- **Consideration could be given to making tutor training compulsory to improve consistency within the student support process.**
  
  The senior tutor in SVS is already working with the Faculty Education Manager for Health Sciences and the other senior tutors to ensure a consistent approach to tutor training and a basic level of competency for tutors. Some training will be jointly run for staff from all three professional programmes.

- **Ensure that all contracts for external teaching provision are signed and up to date.**
  
  This will be an ongoing action for the School manager in SVS.

- **An analysis of the variability in scoring among interviewers involved in the admissions process is suggested to allow for standardisation**
  
  This analysis will be undertaken by the Faculty’s Admissions Team.

- **The development and delivery of the new integrated curriculum currently depends on the enthusiasm and dedication of the academic staff involved. Maintenance of the delivery of the course in future may require additional administrative support and this should be kept under review.**
  
  The Faculty of Health Sciences is committed to ensuring effective administrative support for the programme and will work with academic staff to ensure that they have the appropriate level of administrative support for delivery of an integrated curriculum.

- **Overloading the Senior Clinical Training Scholars with teaching of undergraduates should be avoided and sufficient opportunities for full preparation for the specialist level should be provided.**
  
  Professor Langley-Hobbs has recently taken over as Chair of the SVS Senior Clinical Training Scholar’s Committee which has been tasked with ensuring that Residents in all disciplines have sufficient time for Scholarly activities and for exam preparation.

  The University has stipulated that all Residents register for a post graduate qualification (e.g. Masters in Research). The School will work with the Faculty to ensure that these programmes are approved in 2015 so they can start in 2016.
The SVS-LVS partnership Board will continue to annually review the number of Residents in the Establishment against the context of changing teaching requirements and clinical case numbers. If necessary the partnership Board will make the case to the Faculty and to the LVS Board that more resource must be provided for additional training posts.

- Much of the postgraduate support is based in Bristol and consideration should be given to ways of enabling Langford-based residents and other postgraduate students to engage in the wider postgraduate training opportunities available in Bristol.

The SVS Graduate Directors and the Chair of the SVS Residents Committee will work with the Faculty’s Graduate Dean and the University’s Doctoral Training College to explore ways of enabling Langford based students to better engage with training opportunities in Bristol.

- Provision of a designated space for postgraduates to meet would be helpful to facilitate integration and networking.

The University accepts that this would be valuable and the SVS School Manager and the FHS Faculty Manager will liaise with Estates to try and identify an appropriate space that can be refurbished for this purpose.

- The School could make better use of the SEL, in particular for linking to EMS Feedback Forms, recording of students’ reflective reports to make management of the process easier and making better use of the data that can be downloaded from the system for further analysis.

Since the visitation in November 2014 a new full time staff member has been appointed to support EMS and face-to-face training on the use of the SEL for all academic and support staff making up the EMS team took place on 25th February. This training was delivered by the RCVS Education Officers - Duncan Ash and Jenny Soreskog-Turp and specifically focused on improving the efficient use of the SEL. The school is grateful to the RCVS for this help and support.