MVetMed PROGRAMME SPECIFICATION:

1. Awarding institution	The Royal Veterinary College
2. Teaching institution	The Royal Veterinary College (University of London)
3. Programme accredited by	N/A
4. Final award	Master of Veterinary Medicine (MVetMed)
5. Programme Title	Senior Clinical Training
6. Date of First Intake	2008
7. Frequency of Intake	Annually
8. Duration and Mode(s) of Study	3 full-time calendar years
9. Timing of Examination Board meetings	Annually in July
10. Date of Last Quinquennial Review	N/A
11. Date of Next Quinquennial Review	N/A [First cohort review 2011/12]
12. Entry Requirements	A veterinary degree registrable with the Royal College of Veterinary Surgeons and Membership of the Royal College of Veterinary Surgeons Completion of an appropriate internship programme or at least 12 months working in a relevant clinical or veterinary pathology environment Applicants from overseas will be required to provide evidence of proficiency in spoken and written English and will be required to achieve a score of 7.0 in IELTS or 93 in TOEFL tests.
13. UCAS code	N/A
14. JACS Code	D200
15. Relevant QAA subject benchmark group(s)	N/A

16. Reference points

N/A

17. Educational aims of programme

The programme aims to:

- produce high quality graduates with additional personal and professional skills poised to take up leading positions as veterinary clinicians or pathologists in academia worldwide, in private practice, or in industry.
- produce graduates with experience and expertise in clinical veterinary medicine or veterinary pathology
- produce graduates with critical analysis skills and experience in conducting research projects
- produce graduates with good communication and teaching skills, who are able to take advantage of current developments in information technology

18. Programme outcomes - the programme offers opportunities for students to achieve and demonstrate the following learning outcomes.

1. **Knowledge and understanding of:**	**Assessment by**
• their clinical discipline • the pathophysiological principles behind their clinical area of study • related clinical disciplines • clinical research methodology • ethical and welfare issues relating to clinical practice,	• Continuous formative assessment of case management (on a daily basis) by senior clinicians/ pathologists • Review by senior clinician/pathologist of owner and/or referring vet communication documents • Continuous assessment of participation in clinical/pathology rounds by senior clinicians/pathologists • Assessment of contributions to graduate seminars by senior clinicians/pathologists on a weekly basis • Assessment of participation in journal and text reviews by senior clinicians/pathologists

teaching and research **Teaching/ learning methods** Students will acquire knowledge and understanding through participation in: • Management of clinical cases under supervision • Clinical rounds • Speciality journal clubs • Core taught modules (A modules) • Non-core taught modules (B modules)	• Oral presentations to the relevant Department on an annual basis • Written examinations for the taught component of each module (MCQ, EMQ, essays, practical spot-test exams) • Assessment of the research project report by an internal and external examiner, with an oral defence • Annual appraisal by clinical / pathology and research supervisors
2. **Cognitive (thinking) skills:** • Systematic understanding and critical awareness of new developments in the relevant area of clinical expertise • Planning • Logic • Comprehension • Visual and auditory	**Assessment by** • Continuous formative assessment of evidence-based case management (on a daily basis) by senior clinicians/pathologists • Review by senior clinician/pathologist of owner and referring vet communication documents • Formative assessment of participation in clinical rounds by senior clinicians/pathologists • Formative assessment of contributions to Graduate seminars by senior clinicians/pathologists on a weekly basis

processing • A critical approach to study design and implementation • Confidence in applying statistical analysis to clinical or laboratory studies **Teaching/ learning methods** Students cognitive skills will be developed through participation in: • clinical case or pathological case management/ under supervision • critical assessment of the literature in Speciality journal clubs • Speciality resident rounds • Clinical and research presentations • Taught modules	• Formative assessment of participation in journal and text reviews by senior clinicians/pathologists on a weekly basis • Summative feedback from module written exams • Formative feedback at annual appraisal

C. Practical skills and Abilities	Teaching/learning methods
Graduates will have developed and improved the following: • Proficiency in dealing with complex clinical or diagnostic cases in a referral setting • Competence in performing diagnostic and therapeutic interventions at a referral level, or specialised laboratory techniques • Organisational skills • Interpersonal skills • An ability to communicate clearly to both scientific and non-scientific personnel • Presentation skills, including small group teaching and formal oral presentations • Teaching and learning skills • Information technology skills	• Management of clinical / diagnostic cases under the supervision of senior clinicians/pathologists • Supervised participation in diagnostic and therapeutic techniques • Participation in daily clinical/pathological rounds • Contribution to weekly Graduate seminars • Participation in group review of journal articles and scientific texts • Problem-solving exercises • Attendance at Continuing Professional Development courses within the college • Formal lectures within the taught component of the MVetMed programme at a level above undergraduate or Continuing Professional Development courses • Attendance at Scientific conferences • Preparation and delivery of oral presentations • An individual research project **Assessment** • Clinical case log • Continuous formative assessment of evidence-based case management (on a daily basis) by senior clinicians/pathologists • Review by senior clinician/pathologist of owner and referring vet communication documents • Continuous assessment of participation in clinical rounds

	by senior clinicians/pathologists • Assessment of contributions to Graduate seminars by senior clinicians/pathologists on a weekly basis • Assessment of participation in journal and text reviews by senior clinicians/pathologists on a weekly basis • Oral presentations to the relevant Department on an annual basis • Written examinations for the taught component at the end of each module • Annual appraisal by clinical and research supervisors • Assessment of the research project report by research supervisor and external examiner, with an oral defence
D. Key skills • Clinical problem solving skills • Practical clinical skills • Organisational skills • Data analysis skills • Presentation skills • Teaching skills • Information technology skills **Teaching/ learning methods** • Clinical case management • Client and referring vet communication	**Assessment:** Written research project Oral exam End of year annual appraisal End-of-module written examinations

- Preparation and execution of research project
- Oral presentations within the department and at national/international meetings

19. Programme structures and requirements, levels, modules, credits and awards

Students will

- be assigned to the clinic or diagnostic pathology duty rota and assume primary case responsibility under supervision. Where appropriate, a case log will be kept of all cases managed, and a case summary will be written as part of the client and referring vet communication document.
- participate in Department and speciality seminars and presentations
- participate in weekly journal and /or book review with senior clinicians/pathologists
- participate in weekly training sessions pertinent to chosen discipline

Research Project

Students will conduct a structured research project in the area of their choice over the three year programme, and produce a written research report in the format of a literature review and article in a format suitable for publication in an approved peer-reviewed journal.

Modules

Students will complete all 5 group A modules and any 5 group B modules from the lists below.

Group A modules	**Group B modules**
1. Describing and Interpreting Clinical Data	Problem solving in Veterinary Neurology
2. Applied Research Skills	Cardiovascular pathophysiology
3. Information Technology skills	Dermatology
4. Practical Veterinary	Immunology
	Nephrology & Urology

Education 5. Ethics and welfare	Oncology Endocrine Evidence Based Veterinary Medicine Gastrointestinal physiology Advanced general surgery ECC Module 1: Cardiovascular Focus ECC Module 2: Respiratory Focus ECC Module 3: Haemostasis Focus Musculoskeletal Physiology and Locomotion Respiratory physiology and pathophysiology Molecular and cellular biology –clinical diagnostics Clinical Pharmacology Scientific writing Applied statistics and SPSS Pathology of the Alimentary Tract Pathology of the Respiratory Tract Urogenital Pathology Neurologic and ophthalmic pathology Pathology of the haemopoietic and lymphoreticular system Infectious diseases of dogs and cats Pathology of the Cardiovascular and Endocrine system Laboratory Animal pathology
20. Work Placement	N/A

Requirements (BVetMed and FdSc only)	
	ASSESSMENT
21. Form of Examination	Examinations • Written examinations associated with each module (format individualised by module: e.g. essays, MCQs, EMQs, spot tests). Research project • Formative feedback on a structured 300 word research abstract in year 1 as part of the appraisal form • Formative feedback on literature review (3000-5000 words) in year 2 by supervisor • Dissertation that includes the literature review and description of the research project written in the format of a paper suitable for publication in a peer-reviewed journal appropriate for their Specialty Board, OR an original research first-author publication accepted in a peer-reviewed journal with an accompanying literature review • Oral examination of research project at end of year 3
22. Any requirements to be completed to permit entry to the examination	• Recommendation to continue to next year at the annual appraisal at the end of year 1 and year 2. AND • 3 oral presentations (may be within the RVC) AND • A minimum of 50% in combined marks for 5 group A (core) modules with a minimum of 40% for each individual group A module AND • A minimum of 50% in combined marks for 5 group B (elective) modules with a minimum of 40% for each individual group B module AND

	• A research report submitted by the due deadline before the final 3rd year oral defence .
23. Marking Criteria	See general marking scheme
24. Allocation of Marks	25% 'A' Modules 25% 'B' Modules 50% Research Project <u>Module marking (A and B)</u> (total 50%) Each module will be marked according to the common marking scheme and scaled to 5% for each module. If more than 5 modules from group B modules have been completed, the 5 modules with the highest marks shall be selected. <u>Research Project marking (total 50%)</u> Written research project (45% total) Oral defence (5%)
25. Any additional requirements	
26. Requirements to Pass Overall	To achieve a total average mark of 50% for all assessments combined, with a minimum of 50% in each of the individual components (group A module assessments, group B module assessments, and research project) and a minimum of 40% in individual modules.
27. Consequences of Failure	A student who fails to receive a recommendation to continue to the following academic year at either the 1st or 2nd year annual

	appraisal will be considered to be 'on probation' for the next 3 months until progress is reviewed at a follow-up appraisal. The student will normally be referred to APRICOT at this stage. If satisfactory progress has not been achieved by the 3–month follow-up appraisal, the studentship will be terminated. A student who has not achieved more than 40% in each of the five group A module examinations would require a pass at a resit exam the following year. A student who has achieved less than 40% in a group B module may have to complete an alternative module in order to accrue marks from 5 group B modules to submit towards the 'B' module component. A student who has achieved less than 40% in the research project will be given the opportunity to resubmit the following year.
28. Classification	Distinction: 75% or more; Merit: 65-74%; Pass: 50-64%; Fail: less than 50%
29. Disclosure of Marks	Results will be published by candidate number
30. Dates of Examinations	Module examinations will be held at the end of each module. The final oral examination will be held in July of the 3rd year.
31. Date of production/revision	

ii Subject Benchmark

The MVetMed aims to formalise and provide structure to the teaching and learning of Senior Clinical Training Scholars: students who are enrolled at the Royal Veterinary College so as to become experts within their chosen clinical speciality. The MVetMed encompasses a wide range of clinical and paraclinical disciplines above those that are expected of the related undergraduate BVetMed degree. In particular, the degree has a strong vocational element and encompasses (1) validating a range of practical and professional generic skills, (2) ensuring a comprehensive depth of understanding within a student's chosen speciality and (3) completion of an in depth programme of clinical research. The MVetMed will therefore be awarded after a (typically 3 year) programme to students who demonstrate a thorough understanding in depth of their clinical field in addition to that of their research project. Unlike undergraduate level courses, students enrolled in the MVetMed are expected to respond to current developments within their field, and to be capable of critical reflection of these developments and of their own developing competence in a focussed clinical area. Assessment of MVetMed students' abilities (for example in professional interactions, critiquing of published research, seminar presentations etc) will be assessed on a continuous formative basis and at annual appraisals. Individual module assessments will be set at a standard equivalent to that expected by the European Board of

Veterinary Specialisation. Finally, each student's research project should be at a level suitable for publication in an approved refereed journal.

iii Attainment and assessment of generic skills

MVetMed degrees will be awarded to students who have demonstrated:

1. A comprehensive understanding of the physiology and pathophysiology pertinent to their chosen clinical speciality.
2. Ability to master new techniques and practical skills pertinent to their chosen clinical speciality.
3. An ability to solve advanced problems within their chosen clinical speciality.
4. An ability to plan and execute under supervision a research project and to analyse critically the results and draw appropriate valid conclusions in the context of other published work.
5. An ability to evaluate critically published work in veterinary or related scientific journals.
6. A working knowledge of a variety of experimental techniques and study designs.
7. Effective use of Information technology skills relevant to both their clinical and research work.
8. The ability to communicate complex clinical and scientific ideas to colleagues and lay persons, concisely, accurately and informatively.
9. The ability to manage their own learning through consultation and interaction with colleagues, by didactic teaching, use of appropriate texts and research articles, attendance at meetings and other primary sources.

Assessment will be made by examining (i) objective scores achieved in modular courses; (ii) the quality of a literature review and description of an original piece of scientific research; (iii) appraisal by supervisors of the students' clinical or pathological skills and knowledge whilst performing daily duties. The relative contribution of each of these components is outlined elsewhere in this document.

iv. Start date: September 2008;thereafter July each year

v. Module components

See attached sheets

vi. List of teachers

See attached sheets

vii. Extent of commonality with the BVetMed

MVetMed students will be expected to have a thorough understanding of the taught components of the BVetMed within their chosen area of clinical speciality. However there will be no formal overlap in the taught components of the 2 degrees.