Programme Specification[1]

1. Programme Title(s) and Code(s):

Programme Title	*UCAS Code*	*GU Code*
BSc Honours in Veterinary Biosciences	D300	D300-2107

2. Academic Session:

2018-19

3. SCQF Level (see Scottish Credit and Qualifications Framework Levels):

10

4. Credits:

480

5. Entrance Requirements:

Please refer to the current undergraduate prospectus at: http://www.gla.ac.uk/prospectuses/undergraduate/

6. ATAS Certificate Requirement (see Academic Technology Approval Scheme):

ATAS Certificate not required

7. Attendance Type:

Full Time

8. Programme Aims:

The aim of the Veterinary Biosciences degree programme is to provide an understanding of those aspects of animal science which underpin both the role and use of animals in society and in modern veterinary and laboratory animal practice. As such, the programme will concentrate on those species which have a major societal impact, and will be based on a foundation of core subjects including molecular and cellular biology, proteins and immunology, anatomy and physiology of domestic and laboratory mammals, genetics and oncogenesis, the causes and development of infectious diseases, pathological principles underlying disease processes, the principles and effects of drug action, experimental design and biostatistics and a consideration of

[1] This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if full advantage is taken of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each course can be found in course handbooks and other programme documentation and online at www.gla.ac.uk/

The accuracy of the information in this document is reviewed periodically by the University and may be checked by the Quality Assurance Agency for Higher Education.

management principles. Non-domesticated animal species will be included where appropriate. In addition to lectures and tutorials, selected practical classes will complement problem-based learning exercises. The final year includes a significant research project chosen from a wide spectrum of veterinary and bioscience options.

Specific aims of the programme are to equip students to:

- acquire knowledge of the fundamental and applied aspects of the biology of those species that interact with human society either as companion animals, food producing animals or animal models in biomedical research.
- understand the complex ethical and animal welfare issues created by human interactions with animals.
- explore disease mechanisms and the identification and control of animal disease in an environment dedicated to comparative medicine.
- explore disease interactions between animals and man through an appreciation of veterinary public health.
- gain first-hand experience of scientific research.

The broad nature of the programme is intended to allow exploration of a wide spectrum of the veterinary biosciences. This broad-based approach provides a suitable starting point for many career paths.

9. Intended Learning Outcomes of Programme:

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the areas described below.

By the end of the programme students will be able to:

Knowledge and Understanding

- describe the anatomy and physiology of the healthy animal in its normal environment
- describe the principles of management and nutrition of companion, laboratory and food animals
- discuss pathological mechanisms of disease and oncogenesis
- describe the veterinary pharmacology and drug action of common classes of pharmaceuticals
- discuss and apply the principles of veterinary drug dispensing
- apply statistics and the principles of bioinformatics to address research problems
- apply the principles of veterinary public health, population medicine and epidemiology to relevant problems
- discuss and critically evaluate animal welfare and ethical issues
- demonstrate knowledge of relevant legislation, in the context of animals in society and their use in bioscience research
- demonstrate knowledge and application of business and entrepreneurship in the context of veterinary biosciences
- demonstrate in-depth knowledge of a particular research topic and an awareness of the frontiers of knowledge in that area
- demonstrate an appreciation of the planning and management of research

Skills and Other Attributes

Subject-specific/Practical skills

- demonstrate basic practical skills in handling domestic animals
- demonstrate laboratory based skills commonly used in veterinary biosciences

Intellectual skills

- critically analyse, synthesise and summarise publications
- demonstrate the ability to obtain and integrate several lines of subject-specific evidence to test hypotheses
- recognise, reason and discuss the moral and ethical issues relating to bioscience research
- critically evaluate a given research topic and demonstrate proficient writing skills

Transferable/key skills

- demonstrate an ability to learn independently in preparation for a career of lifelong learning
- demonstrate a spirit of intellectual curiosity and academic enquiry through their research work
- demonstrate problem solving abilities
- demonstrate information retrieval and library search skills
- demonstrate proficient oral & written communication / presentation skills
- demonstrate interpersonal skills and team-working ability by the successful completion of collaborative learning assignments and the honours research project
- demonstrate practical IT skills
- apply time management skills
- recognise health and safety issues and potential hazards of a physical, chemical, radiological or biological nature

10. Typical Learning and Teaching Approaches:

Learning and Teaching methods for individual courses will be selected from the following:

Lectures and audio-visual presentations
Laboratory practicals
Self-directed study involving access to information, research papers, and data, including information on the internet
Farm-based practical classes and other field visits
Seminars
Workshops
Collaborative learning assignments / group projects
Poster presentations
Tutorials
Problem-based learning
Computer assisted learning
Supervised Honours research
Teaching within this programme will be intimately linked with the general research areas of the College of Medical, Veterinary and Life Sciences, as well as the specific research interests of individual teachers. The programme will be delivered in a research rich environment with a wide choice of research projects in final year

11. Typical Assessment Methods:

Assessment methods for individual courses will be selected from the following:
Written unseen examinations (both essay format and objective testing such as multiple choice)
Course work essays
Laboratory reports
Computer-based assessment
Collaborative learning assignments / Peer reviewed group work
Oral presentations
Poster presentations
Student directed learning assignments
Viva voce examinations
Honours project report, oral presentation and supervisor's report
Formative assessment in the form of tutorial and practical feedback, online quizzes and other mechanisms appropriate to the courses

12. Programme Structure and Features:

The first two years of the programme will consist of chemistry, biology, applied animal management quantitative and research skills training and body systems and anatomy. In year three, the focus will be on pathological sciences and will embrace the principles and effect of drug action. The final year will include courses on population medicine, epidemiology and animal welfare, ethics and legislation with a significant research project within MVLS or external laboratories. Courses will be delivered by the School of Veterinary Medicine (SVM), the

School of Life Sciences (SLS) and the School of Chemistry (SC)

Course Title	Course Code	Credits	Core	Optional	Semester(s) taught
Chemistry 1 (Chemistry) (SC)	CHEM1001	40	Y		S1 & 2
Biology 1A (Animal biology) (SLS)	BIOL1001	20	Y		S1
Biology 1B (Cell biology) (SLS)	BIOL1002	20	Y		S2
Comparative Vertebrate Anatomy 1 (SVM)	VETSCI1005	20	Y		S1 & 2
Digestive Physiology & Metabolism 1 (SVM)	VETSCI1006	20	Y		S1 & 2
Veterinary Body Systems 2 (SVM)	VETSCI2009	30	Y		S1 & 2
Applied Animal Management 2 (SVM)	VETSCI2010	40	Y		S1 & 2
Research Skills 2 (SVM)	VETSCI2008	20	Y		S2
Fundamental Topics in Biology 2 (SLS)	BIOL2039	30	Y		S1
Principles of Infection, Infectious Disease and Immunology 3 (SVM)	VETSC3004	40	Y		S1 & 2
The Pathological Mechanisms of Disease and Oncogenesis 3 (SVM)	VETSCI3003	40	Y		S1 & 2
Pharmacology and Drug Dispensing 3 (SVM)	VETSCI3002	20	Y		S1 & 2
Pain and Pain Management 3 (SVM)	VETSCI3001	10	Y		S2
Tools to Investigate Biological Function 3 (SVM)	VETSCI3005	10	Y		S1
Topics and Methods in Veterinary Public Health 4 (SVM)	VETSCI4022	30	Y		S1
Animal Welfare, Ethics and Legislation 4 (SVM)	VETSCI4017	10	Y		S1
Veterinary Business and Biosciences (SVM)	VETSCI4020	10	Y		S1
Advanced Research Skills 4 (SVM)	VETSCI4021	10	Y		S1
Honours Projects (SVM)	VETSCI4018p	60	Y		S2

This programme will be governed by the relevant regulations published in the University Calendar. These regulations include the requirements in relation to:

(a) Award of the degree
(b) Progress
(c) Early exit awards
(d) Entry to Honours (For undergraduate programmes, where appropriate)

http://www.gla.ac.uk/services/senateoffice/calendar/

13. Programme Accredited By:

Not applicable

14. Location(s):

Glasgow

15. College:

College of Medical Veterinary and Life Sciences

16. Lead School/Institute:

Veterinary Medicine [REG20300000]

17. Is this programme collaborative with another institution:

No

18. Awarding Institution(s):

University of Glasgow

19. Teaching Institution(s):

University of Glasgow

20. Language of Instruction:

English

21. Language of Assessment:

English

22. Relevant QAA Subject Benchmark Statements (see Quality Assurance Agency for Higher Education) and Other External or Internal Reference Points:

http://www.qaa.ac.uk/en/Publications/Documents/SBS-Biosciences-15.pdf

23. Additional Relevant Information (if applicable):

Support for students is provided by the Postgraduate/Undergraduate Adviser(s) of Studies supported by University resources such LEADS (www.gla.ac.uk/myglasgow/leads/), Counselling & Psychological Services (www.gla.ac.uk/services/counselling/), the Disability Service (www.gla.ac.uk/services/studentdisability/) and the Careers Service (www.gla.ac.uk/services/careers/).

This programme is distinctive in that it involves a high degree of collaboration between the world-renowned School of Veterinary Medicine and School of Life Sciences and the College of Medical, Veterinary and Life Sciences research institutes.

Distinctive features of this programme include the fact that:

- it will be delivered in a research rich environment with a wide choice of research projects at Level 4.
- within the School of Veterinary Medicine and the School of Life Sciences there are particular strengths in all the subject areas of veterinary biomedical sciences, with many academic staff being at the cutting edge of fundamental medical research, often in collaboration with clinical colleagues.
- the Scottish Funding Council rated teaching and learning in Veterinary Medicine and Biomedical & Life Sciences as 'Excellent'.

Career Prospects:

The Veterinary Biosciences degree will provide an excellent preparation for careers in veterinary research or biomedical research. The programme is also intended for those considering a career in the animal care or pharmaceutical industries where a detailed understanding of the biomedical sciences would be an asset. This could be a suitable starting point for a management career in such industries. Other career possibilities include

teaching of biological subjects at schools, colleges of further education or universities. For further details: http://www.gla.ac.uk/vet/

24. Online Learning:

No

25. Date of approval:	31/10/2016