

Umayah Hewitt
BSc (Hons) Bioveterinary Sciences

'The lecturers' enthusiasm and obvious passion for their respective fields of expertise really is infectious, and incredibly motivating. I love the fact that the RVC is the largest veterinary school in the UK; the diversity really contributes to making the atmosphere absolutely fantastic. There are people from all walks of life, and on different courses too, so don't be fooled into thinking that the RVC produces only vets; this is a great place to find all sorts of professionals, from epidemiologists to neurologists, pharmacologists and beyond!'



BSc (Hons) Bioveterinary Sciences

Three-year course

UCAS CODE: D300
INSTITUTION CODE: RVET R84

In recent years, advances in human medicine have had a tremendous impact on the diagnosis and treatment of disease in animals. Today's veterinary scientists hold prominent positions in the pharmaceutical and agricultural industries. There is also a growing need for veterinary scientists to play an important part in the nationwide promotion of animal health and welfare.

PROGRAMME CONTENT

This degree course is aimed at enthusiastic animal scientists who wish to study the basic biological sciences that inform clinical practice and research. By focusing on the domesticated animals which form the bulk of veterinary work, it aims to give you a sophisticated understanding of their physiology, cellular and molecular biology, and the mechanisms of disease.

YEAR ONE

The first year deals with the healthy animal, and includes the following modules:

- Foundations of Science covers experimental design, scientific method, statistics and epidemiology
- Form and Function is an introductory course in mammalian physiology and anatomy
- Control and Regulation moves beyond organs and tissues to reveal the cellular and molecular mechanisms underpinning normal animal function
- Problem Definition and Investigation introduces you to problem-based learning approaches and the research laboratory environment
- Project: an extended library-based literature review of a current research topic in animal or biomedical science

The tutorial programme allows students to work in small groups of four or five with a tutor, and develops the transferable and professional skills needed for the main taught programme.

YEAR TWO

The second year deals with disease and its treatment, and includes the following modules:

- The Enemy Within explains the molecular basis of challenging degenerative and proliferative conditions, including neoplasia, cancer and autoimmune diseases
- The Enemy Without covers microbiology and parasitology, and the role of infection in animal disease, including the factors determining transmission and virulence, and pathological effects
- Pharmacology Principles and Practice shows how cutting-edge pharmaceuticals can be used to probe normal and diseased mechanisms, and form a basis for therapy
- From Lab to Market gives students a taste of the world of business, as well as exploring important transferable skills such as teamwork

The tutorial programme continues to develop your skills-base and begins to look at career opportunities and work on related skills, such as interviewing.

In the final term of Year Two, you put the learned theory into applied research by undertaking a project during a supervised laboratory placement.

YEAR THREE

In your third and final year, you progress to more specialised, in-depth study. You may choose from a variety of subjects, including Comparative Animal Locomotion, Advanced Skeletal Pathobiology, Infectious Disease, Reproduction and Development, and Pathology. Other third year modules are currently in development.

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PROJECTS

In this final year, you will also undertake a substantial research project and report. At the end of Years One and Two, you will have completed two supervised science reports, developing sound laboratory and analytical skills alongside your theoretical knowledge. Independent project work will also be extremely valuable later on in your career, should you decide to pursue academic or industrial research.

SUMMER VACATION PLACEMENTS

Funding for several supervised research laboratory placements is supplied by the RVC. They run for between six and ten weeks according to the subject area. Recent first and second year summer vacation projects have investigated:

- friendly fire: the eosinophil as protector or enemy?
- regulation of equine trophoblast differentiation
- the relationship between compromised blood circulation and striated muscle development
- the vitrification of bovine spermatozoa
- influence of maternal nutrition on fat deposition in the liver of offspring

Please note: A BSc (Hons) Bioveterinary Sciences degree does not make you a member of the Royal College of Veterinary Surgeons, or allow you to practise as a veterinary surgeon.

ENTRY REQUIREMENTS

A LEVEL

You must have **three B grades or above including Chemistry and either Mathematics, Physics or Biology**. Your third A Level can be in any subject you please (except General Studies).

AS LEVEL

The RVC supports the opportunity to take additional subjects at AS Level but does not prescribe or prefer any particular subject choice or combination.

14 - 19 DIPLOMA

Advanced Diplomas will be considered for 2010 entry in addition to A Level Chemistry at grade B and either A Level Biology, Physics or Maths at grade B.

GCSE

You will need at least five GCSEs at grade **C or above including B grades in English, Maths, and Double Science** (or in two separate science subjects).

Wherever you're from, as long as you have the equivalent qualifications to those listed above, your application will be more than welcome, and will be considered on a case by case basis.

For more information or advice on any aspect of our entry requirements, please don't hesitate to contact the Admissions Office. You can telephone us on +44 (0) 20 7468 5147 or email us at enquiries@rvc.ac.uk

Annie Weckie
RVC alumna

'I never realised how useful my BSc Bioveterinary Sciences would be. It's helped me land a fantastic job working at Servier as a medical rep, and it meets my need for science knowledge on a daily basis. I also believe that my time at the RVC has given me the confidence to counter assertive objections (also on a daily basis!), to deliver presentations and meet tight deadlines. During my training here, I coped better than any of my colleagues, and I really think this was because of the workload I had to learn to manage at the RVC.'

EQUIVALENT QUALIFICATIONS

SCOTTISH QUALIFICATIONS

Candidates offering Scottish qualifications must pass five Highers including Chemistry and either Maths, Physics or Biology and must also pass Advanced Highers Chemistry and either Maths, Physics or Biology with grades BB.

BTEC NATIONAL DIPLOMA

Please check our website for further information.

ACCESS TO HE DIPLOMAS

Please check our website for further information.

IRISH LEAVING CERTIFICATE

Grades of BBBB including Chemistry and either Maths, Physics or Biology are required at Higher level. It should be clearly stated on the UCAS form which subjects are being studied at Higher level and which at Ordinary level.

BIOMEDICAL ADMISSIONS TEST (BMAT)

Although BMAT is not required for entry to the BSc (Hons) Bioveterinary Sciences, applicants who wish to be considered for the Merit Scholarships will have to take the BMAT test. Please see page 71 for more information about Merit Scholarships.

Applicants whose first language is not English must have an acceptable English Language qualification eg IELTS at 6.5 or above.

APPLICATION INFORMATION

Applications for admission to the BSc (Hons) Bioveterinary Sciences should be made through UCAS during the period 1 September to 15 January for entry in the following September. It may be possible for late applications to be considered.

www.ucas.com

UCAS code: D300

Institution code: RVET R84

If you are made an offer you will be invited to visit the College. You will have the opportunity to discuss the course with a tutor and to meet current students.

ENTRY PROFILES

Further information about the course and application processes can be found in the Entry Profile on the UCAS website.

BSc (Hons) Intercalated Options

One-year course

AVAILABLE TO BVETMED D100
STUDENTS ONLY

Many BVetMed students recognise that intercalation gives them a more rounded education and broadens their career options. Often their aim is to gain a BSc (Hons), and though they usually opt to intercalate between their second and third years, intercalation after the fourth year is also possible.

Students have the option to do an intercalated BSc during their BVetMed course. This is an opportunity for students to study a topic of their interest in more depth and involves an extra year study from which they will gain a BSc (Hons). There are many intercalated courses available to veterinary students. We run an intercalated course at the RVC entitled Veterinary Pathology (see below for details). In addition several of the other University of London colleges run intercalated courses or many students find their course of interest at a university further afield.

BSC (HONS) VETERINARY PATHOLOGY

As the science of disease, pathology comprises all aspects of how a pathogen and a host interact and is thus central to the understanding and conduct of veterinary research and clinical medicine. This degree provides a unique opportunity for a few exceptional second and third-year BVetMed students to add a year on to their studies and experience first-hand the excitement of contemporary pathology, and its far-reaching scientific relevance.

BVetMed students are eligible to compete for ten dedicated Wellcome Trust Scholarships, which include the payment of tuition fees and a £5,000 bursary. The competition and interviews for these are held in January/February of the year preceding enrolment.

PROGRAMME CONTENT

This dedicated programme includes two compulsory taught modules (The Diseased Cell and The Diseased Animal) and a personal research project. It explores some of the most important issues in pathology today, including Foot and Mouth Disease, Bovine Spongiform Encephalopathy, Avian Influenza, Tuberculosis and Bovine Viral Diarrhoea Virus.

The taught modules combine lectures by outstanding academics from a variety of research institutions with small group seminars and practical classes, including regular necropsy examinations and pathological case conferences. The two taught modules are structured as follows:

THE DISEASED CELL

Module lasts six weeks and covers:

- Differentiation of normal cells
- Gene regulation manipulation
- Molecular processes in inflammation and immunity
- Cellular markers in diseases of the immune system
- Cell cycle, cell death and repair
- Malignancy and comparative oncology in veterinary species

THE DISEASED ANIMAL

Module lasts six weeks and covers:

- Plagues – old, new and those yet to come
- Pathogenesis of persisting viruses
- Neurodegenerative diseases
- Introduction to toxicological pathology
- Wildlife diseases and zoonosis
- New technologies in (veterinary) research such as genomics, proteomics and functionomics

RESEARCH PROJECT

Having studied the taught modules, you have four and a half months to complete an independent project involving the design, development and execution of detailed research into a subject or species that particularly interests you.

Supervised by scientists of distinction, it may be undertaken at the RVC, the Veterinary Laboratories Agency, the Institute of Animal Health, or the laboratories of the Animal Health Trust or Cancer Research UK. Funding for your research project is provided by the College.

For further information on any aspects of the course, please visit

www.rvc.ac.uk/Education/Undergraduate/BScVetPathology