

# MSc in Veterinary Parasitology

Veterinary Parasitology and Ecology Group,  
School of Biological Sciences  
University of Bristol, Bristol, BS8 1UK, UK

Parasites remain one of the most important constraints to animal health, welfare and productivity. A detailed understanding of the biology, ecology and epidemiology of the parasites, in association with the hosts they inhabit, is essential to allow acceptable levels of control to be achieved.

## Aim:

To equip students with the necessary practical skills and knowledge to develop a career in research, training or control of parasitic diseases of veterinary importance or to enhance their clinical skills as a step to specialist status. The MSc is designed for graduates in biological or veterinary sciences.



**Outcomes:** On completion of the course students will be able to demonstrate:

- knowledge and understanding of the biology and ecology of parasites of veterinary importance;
- laboratory skills in the preparation and examination of a range of parasites of veterinary importance;
- knowledge of the key morphological and physiological features of parasites of veterinary importance and their identification
- broad knowledge of current issues in veterinary parasitology and critically appraise published work;
- ability to design, undertake and interpret a research project, presented as a dissertation.

**Delivery:** the course will use a combination, of taught modules, practical classes, set reading, seminars, workshops, self-directed project work, literature evaluation and an extended research project.

**Duration:** 1 year

**Entry Requirements:** a good Honours degree (2.1 or higher) in biological or veterinary science is required. Other qualifications with a strong biological content, or together with considerable practical/field experience, will also be considered for non-standard entry.



## Why Bristol?

At the University of Bristol, we have substantive expertise and an international reputation in veterinary parasitology. In 2008, the University will host the European Veterinary Parasitology College and the British Association for Veterinary Parasitology annual meetings. The Bristol Veterinary Parasitology research group also has strong established links with veterinary researchers and clinicians interested in parasitology around the world, both in veterinary agencies and industry. Pre-clinical veterinary parasitology has, historically, been taught from the School of Biological Sciences at Bristol, but we have strong working links and support from the Bristol clinical veterinary school.

## Course structure

The taught element will include: lectures, practicals, workshops, directed self-education and will contribute 120 credit points. As described, the option exists for students to take only this element of the course and leave with a Diploma in Veterinary Parasitology. Students wishing to graduate with the full MSc in veterinary Parasitology will then additionally undertake preparation of a research proposal and a research project.

Month	Taught elements	Research proposal	Research project
Credit points	120 cp	10 cp	50 cp
Duration	25 weeks	5 weeks	20 weeks
October			
November			
December			
January			
February			
March			
	Exam		
April			
May			
June			
July			
August			
September			

## Assessment

	Summary of assessment methods
<b>Diploma</b>	<ul style="list-style-type: none"> <li>• DSE oral and written reports</li> <li>• Written exam</li> <li>• formal practical examination</li> <li>• For borderline cases or a candidates for distinction <i>Viva voce</i> examinations will be held</li> </ul>
<b>Diploma MSc</b>	<ul style="list-style-type: none"> <li>• submission of a research council-style research proposal with incorporated literature review</li> <li>• research dissertation presented in the form of a research paper</li> </ul>

## Course syllabus: taught elements

The taught element (delivered through lectures and practical classes) will focus on the parasites of primary importance in veterinary practice. The topics covered will be considerably more extensive and detailed than those currently taught in BVSc undergraduate Veterinary Parasitology as well as requiring students to apply their knowledge consistently to set problems. Modules will proceed through basic biology, to an examination of parasites by host plus epidemiology and emerging diseases. Themes will include:

- Location of mature and immature stages in the host species and how the parasites cause disease.
- Life cycle in detail, including a understanding of duration of development and survival outside the host, and specific knowledge of any intermediate hosts involved.
- Main source(s) of infection for the host, and how exposure may be minimised by appropriate animal management.
- Hence, strategies for control of the parasite through, e.g. animal management and appropriate use of anti-parasitic drugs, including how effective these are likely to be.
- How important the parasite is as a cause of disease in the UK, and what threats it poses to animal health and production and public health.
- Which techniques are used to diagnose infection. You should be able to recognise forms of the parasite likely to be found by the investigating clinician, and assess the significance of finding or failing to find these forms.

Core lectures will follow those currently associated with the BVSc Veterinary Parasitology Unit, however additional higher level lectures, workshops and DSE will run alongside these elements. Each cluster of thematically linked workshops and lectures will have an associated practical and DSE.

1. **Set reading** to improve the depth of knowledge and understanding of areas covered in lectures. This will include some core material to save time in lectures. This component is not assessed separately, but is examinable as part of the written examinations.



2. **Seminars** on selected, topical aspects of parasite control in animals, some involving outside speakers. Subjects will be decided during the year, and any examinable components will be specified at the time.

3. **Workshops.** Students will be asked to investigate a selected topic or clinical case study, associated with the lectures in that week) and asked to present the results to the other students in a workshop at the end of the week. This task is intended to allow students to consider gaps in the knowledge base that limit the scientific basis of parasite control, consider the potential for advances in years to come, gain insight into the process that drives the acquisition of new scientific knowledge in the field, and develop their critical faculties in relation to scientific value and project management.

## Course syllabus: research project

In your research project you will be supervised by a member of academic staff and work closely with that staff member in his or her research laboratory. The subject to be studied during the project will be decided in discussion with the Course Director, student and proposed supervisor. A very wide range of potential projects in veterinary parasitology will be available.

## Course Text

Taylor, Coop & Wall (2007) *Veterinary Parasitology* 3<sup>rd</sup> Ed. Blackwell Science. [This covers most of the material in the core units].

## Course Fees for 2009

- Home: £4,200,
- Overseas: £14,750

## How to apply

please send a copy of your c.v. and a covering letter to:

Professor Richard Wall,  
Veterinary Parasitology & Ecology Group,  
School of Biological Sciences,  
University of Bristol, BS8 1UG.  
E-mail: richard.wall@bristol.ac.uk

