

Research Project

Introduction to the Project

Welcome to the project

Welcome to your Research Project. This is an optional component of the Veterinary Epidemiology and Public Health programme and the Livestock Health and Production programme of the Royal Veterinary College. The research project is the equivalent of an optional course and may be one of the four choices you add to the three core courses in your selected MSc programme.



We strongly recommend that you complete the optional course *Research Design, Management and Grant Application Writing* before undertaking a research project as part of your MSc.

In choosing to carry out a research project you take the opportunity to conduct an investigation on a subject of your own choice, within the topics of the MSc. This option will provide an important, qualitatively different addition to your academic experience as a postgraduate student.

The overall objectives of the project are:

- to introduce you to methods of scientific investigation
- to train you in the critical evaluation of the scientific literature
- to enable you to acquire experience in the preparation of a scientific report.

The meaning of research

Research can be broadly defined as 'a systematic study toward a more complete knowledge and understanding of a particular subject'. But there can be different definitions based on the purpose and type of research. For example, basic research, applied research, market research and research for development all involve different tools and methods. Laboratory-based research requires specific reagents, technology and machinery, whereas applied research may require field-based applications and specialized evaluation methods.

The importance of conducting a research project as part of the MSc programme is to train you as an independent researcher. As a final outcome you will be able to prepare a scientific paper for publication in a peer-reviewed journal. From a wider perspective, the experience you gain from this part of the programme will equip you with the skills to undertake further research projects at your own workplace and/or within your own country.

What will you learn from your research project?

By the end of this project you should be able to:

- form a suitable hypothesis on which to base a research project
- write a critical literature review
- design an appropriate study with experimental and statistical details
- cost a project and conduct experiments
- manage a project in order to obtain relevant data
- document and analyse the results to achieve a conclusion
- select an appropriate scientific journal to publish the findings
- prepare a paper for publication according to the author guidelines of the selected journal.

Project management

To introduce you to the process of managing a research project, you are advised to complete the study unit 'Research Project Management at Laboratory Level', which is included in this project pack together with some readings. This unit explains the basics of planning and managing the different stages of your project and the importance of accurate record keeping.

You should allow approximately 12 hours of study time to work through this unit.

The author

The study unit was written by Margaret Collins. An enduring passion for Margaret has been to answer the question 'How does that work?'. In her academic life this has expressed itself through the pursuit of molecular biology and an exploration of the role of genes in the programming of biological systems for development, for growth and disease pathogenesis. As a European Fellow of the Royal Society she began her postdoctoral career in France. Returning to the UK as a Research Fellow at the University of Surrey, she was then appointed Head of the Molecular Biology Section within the Department of Protein Engineering at the Institute for Food Research and, moving into the field of animal welfare, became a Senior Scientific Officer at the Institute for Animal Health. She is currently employed as a senior lecturer at the Royal Veterinary College. In parallel to the molecular investigation of health and disease she is fascinated by the interactions of people, by communication and human potential. These interests have inspired her work as a professional coach gaining qualifications in a range of performance management technologies. Combining these two aspects of her professional passion she trains and supervises many postgraduate students and postdoctoral workers, both in the details of their scientific discipline and in a wider base of personal, organizational and self-management skills.

Project structure

Once you have received approval of your project outline from the Programme Director, you can proceed with the work, which can be divided into the following three main phases:

Phase 1 Preparing the Research Proposal

In this first stage you will select the research question, based on the feasibility of completing the project within the time and budget available to you. Having determined your research question, you will then undertake a preliminary literature review as part of the process of drafting a project plan with timelines and specified research methods. You will then submit this draft proposal to the Programme Director for approval.

Phase 2 Conducting the Research

Once your proposal is approved, you will carry out your study based on the project plan that has been agreed. You are expected to monitor your progress against the plan and there will be a mid-term evaluation to check that you are on track.

Phase 3 Report Writing and Submission

In the final stage you will prepare your report and submit it for evaluation, with your full literature review. You should select a journal for publication of the scientific report as a technical paper.

Before your report can be submitted to any scientific journal for publication, the work must be discussed and draft manuscripts lodged for scrutiny and approval with your supervisor(s), who will have the right to veto submission. Undertaking a research project under supervision implies acceptance of these conditions.

Calendar and planning

It is expected that your research project will be undertaken during an academic year (February to October). You should, however, begin planning for the research project the year before you undertake it. The following dates mark key stages along your timeline. Note that these dates are for guidance – there may be some slight variation depending on the nature of your research.

Before you register to undertake a research project (**February**), you must contact the Programme Director and write an outline of your proposed project (about 800 words). This should be handed in by **30 September** in the year prior to undertaking the research project.

By **1 December** in the year prior to undertaking the research project, you will be advised of the outcome of your proposal.

If the Programme Director approves the outline you will be allowed to register and to prepare a detailed research proposal (1500 words). You will be given permission to register only if the Programme Director is fully assured that you have both the local facilities and the support you need to complete your project.

By 1 January in the calendar year in which you wish to hand in the report, you must submit your written proposal (no more than 1500 words) for review by the Programme Director and an appropriate subject expert.

By 31 January, once your proposal has been approved, a supervisor will be selected for you. In all cases there will be an RVC supervisor and an attempt will be made to identify and obtain guidance from a local university or research institute.

February to August is the period in which your research should be conducted.

In May, your supervisor will conduct a mid-term assessment of your progress.

Mid-August to mid-October is the period in which you should write up your research, in the form of a literature review and a scientific report for publication.

By 31 October you must submit your project report to the Distance Learning office at the RVC.

In December you will take your oral examination, either in person, or by telephone, or via video link.

Assessment

Your work for the research project will be assessed by evaluation of the final report and by oral examination.

The mark obtained for the written report will account for 80% of the grade awarded and the mark for your oral examination will make up 20%.

