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## **POSTGRADUATE COURSEWORK**

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### **VETERINARY PUBLIC HEALTH MANAGEMENT**

Recent global crises in animal and public health have highlighted the need for greater involvement of animal health professions in surveillance, disease control and prevention. The current spread of highly pathogenic avian influenza, the 2001 foot and mouth disease outbreak in the United Kingdom and the food safety issue of bovine spongiform encephalopathy are clear examples of the need for enhanced training at post graduate level. To ensure we have the skills needed in the animal health profession and in response to this urgent need, the Faculty developed a postgraduate training program in epidemiology and veterinary public health in 2002. The program, supported initially by Meat and Livestock Australia, the Vincent Fairfax Family Foundation, the McGarvie Smith Trust and the Australian Government Department of Agriculture, Fisheries and Forestry has received widespread endorsement from industry, government, community organisations and the University.

The program has two major objectives. The first is to develop professionals with technical expertise in veterinary epidemiology, food safety, zoonotic diseases, animal health economics, disease control, and animal health policy development. The second is to provide skills focused on teamwork, leadership and project management. There are recognised needs for people with these skills in animal and public health industries globally. The vision has been to produce leaders in veterinary public health.

The postgraduate program has three articulated award courses at the Graduate Certificate, Graduate Diploma and Masters levels and is offered by a combination of distance education units of study and short, intensive residential units. Distance education units provide an appropriate learning environment for busy professionals, with small group interaction via a web-based classroom. In 2007 an option to complete honours was added, requiring an additional 12 credit points of research to the Masters level for students achieving a high average mark.

Experienced, external unit of study facilitators teach alongside academic staff from the Faculty of Veterinary Science. Eight new units of study were developed in 2004 to complement those developed in 2002-2003.

Quality assurance systems for all areas of the new program were developed, implemented and are measured against standards. This resulted in the program being awarded a competitive national award for quality in higher education through the Carrick Institute, in 2006. The quality of each unit of study is ensured by academic review by a prominent leader in the relevant field as well as by involvement of an instructional design consultant throughout the development process and during first-time delivery of each unit.

Support from key sponsors was critical to program development – approximately \$650,000 for the period 2002 – 2007. This enabled:

- Consultation and collaboration with representatives of the livestock industries, the veterinary profession and government and academic personnel
  - Development of graduate attributes, curriculum, documentation, quality systems, assessment policy and program infrastructure
  - Authorship, academic review and instructional design of 18 new units of study over 2002-2005
  - Training of new facilitators in online teaching and learning
  - Development of systems for ongoing professional development in online teaching and learning for facilitators
  - Preparation of guidelines, supervision and support schemes for Masters research projects
  - Marketing the new program to both employers and potential students
  - Supporting high quality education for a relatively small number of new students during the development period
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Units of study now available include:

- Veterinary Epidemiology 1
- Veterinary Epidemiology 2
- Animal Health Economics
- Data Analysis for Policy Development
- Animal Health Data Management
- Hazards to Human & Animal Health
- Animal Health Policy Development
- Leadership, People & Organisations
- Leadership: Managing Change
- Project Management
- Aquatic Animal Epidemiology
- Wildlife Epidemiology
- Food Safety
- Surveillance, Preparedness and Response
- Risk Analysis
- Diagnostic Tests
- Data Analysis for Epidemiological Research
- Introductory Biostatistics (with School of Public Health)
- Research Paper

The VPHMgt program's success as a model of postgraduate coursework has also influenced the development and expansion of postgraduate coursework in the Faculty in 2007, particularly a linked program in Animal Breeding Management program.

In 2007, the VPHMgt team launched an associated program in Veterinary Public Health – a fully online postgraduate program, particularly suitable for students seeking advanced technical skills in veterinary public health. Offered in collaboration with the School of Public Health, this new program seeks to leverage the considerable investment in this course, by offering its online units of study in Veterinary Public Health in a postgraduate course that does not require students to attend sessions in Sydney (though they may). The goal is to provide a variable form of access to VPHMgt units of study. For many countries (Australia included), allowing staff working in veterinary public health roles leave of absence to pursue face-to-face study, even for short periods, can place unacceptable strain on national biosecurity and public health systems. Furthermore, the training needs of some students are better met in a program that emphasises technical training in biostatistics, epidemiology, data analysis and animal health economics. Units of study in addition to those available in Veterinary Public Health Management include 6 credit points in Biostatistics and a new unit of study *Data Analysis for Epidemiological Research*.

There were approximately 80 students in VPHMgt in 2007, with graduates now located across Australia and in New Zealand, as well as Canada, USA, Hong Kong, South East Asia, the Pacific and Africa. Graduates are taking increasingly senior roles in both government and commercial organizations and examples abound of leadership in veterinary public health by both students and alumni.



**Students at Residential Session, February 2007**

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