

POSTGRADUATE CERTIFICATE IN AVIAN HEALTH

1. Background

The present Master of Veterinary Studies (MVS) is an established Coursework -based degree of the Faculty of Veterinary Science, offered 1999-2004 through face-to-face delivery in Avian Health for completion full-time (12 months) or part-time (24 months). The present MVS(Avian Health) is a 100-point Masters with no Certificate pre-entry qualification.

It is now proposed to adapt this Course for on-line distance delivery so that studies can be undertaken part-time by veterinarians in their places of work in the global poultry industries by introducing a Postgraduate Certificate in Avian Health (PCAH) which on successful completion will comprise 50 Credit Points, in 12 –24 months of studies. The PCAH can thus provide a common point of entry to the MVS (Avian Health) for veterinary graduates having differing backgrounds of educational and relevant professional experience. Introduction of this course will assist in assessment of the suitability of students to proceed on to MVS level studies while also familiarising them to on-line delivery for self paced learning.

MVS (Avian Health) candidates on completion of the Postgraduate Certificate in Avian Health, will require to complete a further 100 credit points at Masters level in a further 2- 4 years being comprised of:

- Three further Units each 25 Credit-point subjects, for which the scope of contents will be based around the present MVS (Avian Health) curriculum, as is
- Preparation of an Avian Research Project Dissertation, 25 Credit-Points.

The modern poultry industry in Australia is a major primary industry (Meat \$2.2 billion; Eggs \$ 0.75 Billion p.a.) and the poultrymeat intake average of 35kg per person per year is a very significant source of high quality (animal) protein in diets. Globally, consumption of chickenmeat per head now averages 10kg per year and the poultry industry is the fastest growing of all the animal-based agribusinesses.

Of a total of some 65 million tonnes (Mt) of product, the industries of the economically developed and the developing countries currently produce approximately equal amounts. By 2015 however, the poultry industries of those economically still-developing countries will produce some 60% of the world total, projected at 100.6Mt, while by 2030, poultry production from developing countries will double that of the developed countries (FAO statistics, *Poultry International Jan 2003*). Increased international movements and trade in poultry products will therefore be an inevitable development during the coming decade and then continue to rise.

In the development of modern poultry industries, production is not sustainable however without strong control over poultry health. Expertise in poultry health must be provided through professional veterinarians who are appropriately trained as avian species specialists. Public health assurance through their professional skills in ensuring the microbiological safety of poultry products have also become key competencies for specialist avian veterinarians.

The **Master of Veterinary Studies (Avian Health)** degree by coursework has been developed and taught by this University 1999-2004, to enable graduate veterinarians to access the professional knowledge which they will need in order to improve poultry productivity and to ensure product safety for public health. The course has been designed to develop the professional competencies and skills that are required for avian veterinarians to be able to operate effectively within both modern (intensive) and the still-developing poultry industries. Adapting the MVS (Avian Health) Course for on-line distance delivery would assist all of those veterinarians who aspire to undertake postgraduate education in avian health, and enable them to do this while continuing to operate at their place of work.

The proposal to **convert the MVS (Avian Health) course for distance education** will directly serve the strategic and operational goals of the University of Melbourne in internationalisation, by providing a global access to a specialist professional educational course which is benchmarked against world's best practices in quality of academic content and in distance teaching.

The MVSAH course since its inception in 1999 has been strongly supported by the Australian poultry industry because of the importance to industry of having veterinarians with high levels of professional competencies. Some 5 scholarships for veterinary graduates who are Australian citizens/residents, totalling in excess of

\$200,000, have been provided through the RIRDC programs of both the chickenmeat and egg sectors, and the Australian Poultry Cooperative Research Centre for 2003/04. As part of the educational activities of this CRC, the MVSAH Degree Course of the University of Melbourne has specifically been nominated for competency-based training of veterinary poultry specialists. The MVSAH or the Postgraduate Diploma in Avian Health are not offered by other universities in Australia.

Establishment of a coursework-based **Postgraduate Certificate in Avian Health (PCAH)**, as an interim stage for the progression of postgraduate education for avian veterinarians, is now proposed to APC. This unique course can function as a complementary development for the **MVS (Avian Health) Course by on-line delivery**, but also as being a stand-alone Award.

The PCAH has been designed to assist in providing a common point of entry to the MVS (Avian Health) for veterinary graduates having differing backgrounds of educational and professional experience, whilst also assisting assessment of the suitability of students to proceed on to MVS-level studies when they have completed this Postgraduate Certificate.

Also however, successful undertaking of the fields of studies for the PCAH award will provide a useful educational grounding for several practical groupings of veterinary practitioners who may wish to obtain and use greater than Bachelor's degree competencies in Avian Health.

Graduating with a PGCAH can provide the following benefits:

- As an endpoint award, it will ensure that the means exist in Australia for an avian practitioner to undergo a strong formal upgrading and review of their knowledge of best practices in international poultry production, insight into production-health interactions and for graduates to acquire much strengthened professional skills in poultry pathology and disease diagnosis.
- For experienced veterinary practitioners who lack prior experience with poultry, the combination of guided readings and practical mentorship proposed will allow them to obtain exposure to the poultry industry. This career option may not have been open to them previously.
- Poultry pathology, whether conducted at the gross disease level by field autopsy, or by microscopic examinations (histopathology), is the key discipline area of competency for beginning the process of systematically recognising and/or investigating poultry diseases. Autopsy procedures and investigations are the major investigative procedure that must be used routinely by field- and laboratory-based poultry practitioners. Studies in pathology therefore can provide a major launching pad for specialisation in avian health.
- From both developed and the developing poultry industries, pathology has proved to be the subject which is most commonly requested for formal postgraduate study.
- For veterinarians who are not wishing or able to commit to the subsequent 2-4 years of part-time studies involved in completing the Masters level degree in Avian Health, the Postgraduate Certificate in Avian Health can provide a 12-month postgraduate course of studies which will directly enhance quality of performance within their professional work.

These proposals for on-line delivery of the Postgraduate Certificate in Avian Health and the Master of Veterinary Studies (Avian Health) developed during the last 2 years using as processes:

(i) The Course Design and Content:

Has been refined through experience in Teaching and Learning gained over 5 cycles (1999-2004) of presentation of this Course material to local and international veterinarians within the age groups and professional experience targeted for participation in Avian Health Online™.

(ii) Avian Health by distance education:

Poster and electronic demonstrations have been given by staff of the Faculty of Veterinary Science in papers at Australian national-regional and at International forums for poultry health e.g 13th World Veterinary Poultry Congress, Denver, July 03. Strong agreement has been expressed by participants in all of these forums, on the world-wide need for such an on-line Course and the potential value of electronic delivery if the associated educational processes can be designed to deliver *effective situational learning*.

(iii) Avian Health Teaching and Learning: Testing feasibility of electronic delivery.

During March-April 2004, a Proof-of-Concept Electronic Website was constructed by the Faculty of Veterinary Science in close collaboration with David Hirst and team of Courseware Development Services, Dept of Teaching, Learning and Research Support (TeLARS) University of Melbourne.

This was a pilot project, undertaken to examine the feasibility of developing an effective teaching and learning resource in veterinary distance education. A major topic within the poultry pathology Unit, Avian respiratory diseases, was selected for testing the effectiveness of delivery of content for students in a dynamic web environment. Teaching material of text and electronic images was also augmented in the model by the use of hyperlinks to the relevant sections of another Unit (Avian Microbiology-Serology). Students then responded to a series of self-assessment tasks including Multiple Choice Questions, with rich feedback being provided within the answers. This system provides a self-paced learning environment with tasks embedded into the content, and is able to promote active situational learning. Follow-up exercises are submitted and assessed on-line, with marks being made available to the student through the system. Also trialled was a range of electronic systems for internal navigation, multimedia and animations formats for teaching and learning.

See Website url: Access details will be supplied by TeLARS via contact Mathew Riddle mathew@unimelb.edu.au or ext 4-7579

Assessments by a panel of Users have been positive for almost all aspects of content, layout, level, educational value and electronic- operational aspects. A good educational template has therefore now become available for the practical development and delivery of these two Avian Health courses which are designed for on-line delivery.¹

(iv) Quality of scientific and educational content.

Through avian health research networks and collaborations, already established with avian veterinarians and scientists nationally and internationally, as well as present staff and their expertise, the Faculty has access to world class expertise for sourcing teaching materials. Human resources will include eminent associate avian pathologists eg Dr Juergen Lohr, based in Aulendorf, Germany and Dr Rodney Reece NSW, co-author of the leading international avian pathology text and Fellow of the Avian Chapter, Australian College of Veterinary Scientists. Current members of the academic staff of this Faculty include leading Australian avian veterinary microbiologists Drs Trevor Bagust, Prof Glenn Browning and Dr Amir Noormohammadi, all of whom are available to contribute directly to on-line course development in avian health. Also already affiliated academically with this Faculty for specialised subject content within these proposed avian health courses are Drs Greg Parkinson and Peter Scott (Avian production-health interactions) and Dr Grant Richards (Production and financial analysis). Eminent private avian veterinary consultants, who already participate in MVSAH course activities, include Dr Peter Groves (Zootechny Pty. Ltd., NSW.) and U.K.-based International Consultant in poultry health and food safety, Dr Nigel Horrox. All of the specialist veterinarians named here have indicated their interest in being involved in the preparation of course content of the highest scientific and educational value for this avian veterinary postgraduate course of studies.

2. Entry Requirements

Eligibility

1. The Selection Committee will evaluate the applicant's ability to pursue successfully the course using the following criteria –
 - a 5 year Veterinary Science degree, or an equivalent qualification (Veterinary School listed in the WHO Directory) and,
 - either at least one year of documented professional practice in the poultry industry, or 2 years of documented veterinary practice with small or large animals or other category of professional practice in veterinary disciplines.

¹ This Faculty would wish to record its appreciation to TeLARS for the high quality of their educational guidance and the design advice which they have provided to our staff while the prototype of this electronic on-line teaching system was under active development.

Selection

2. The Selection Committee may conduct interviews or tests and call for referees reports and employer references in order to elucidate any of the matters referred to above. Preference may be given to applicants with previous veterinary experience in the poultry industry.

3. Course Structure

The Postgraduate Certificate in Avian Health (50 Cr Pts) is designed to serve as the entry point to MVS(AH), but in itself is able to provide value as an endpoint Award Course. Successful completion will require some 12 months of study, with up to 24 months being allowed depending on the work-circumstances of the individual student. Completion of the PCAH Course will also enable students to obtain practical experience in self-paced learning by on-line distance education, a useful exercise prior to their commencing Masters-level studies.

The subject Poultry Industry Field Work (25 Pts) will usually be taken in semester one and Poultry Pathology & Diagnosis of Diseases (25 Pts) in semester two.

The course will be offered part-time only.

4. EFTSU and Budgetary Consequences

The course will be offered to international and Australian students on a fee-paying basis.