ON THIS COURSE YOU WILL LEARN ABOUT RECENT ADVANCES IN NUTRITION SCIENCE, AND HOW TO COUPLE THESE WITH PRACTICAL FEED ASSESSMENT AND FORMULATION. ALL WITH THE OBJECTIVE OF MAXIMISING HEALTH AND PRODUCTION IN RUMINANT SPECIES FOCUSING ON DAIRY AS A BASE SYSTEM. FOR ASPECTS OF COURSEWORK WE ENCOURAGE YOU TO SELECT THE SPECIES OR SYSTEM THAT IS OF KEY INTEREST TO YOU.

LECTURER: Ian J Lean BVSc(Syd) DVSc PhD(Calif) MANZCVS
- A Sydney graduate Ian has worked in practice and academia at Universities of California and Sydney. Ian completed his PhD with majors in Nutrition and Epidemiology.
- Past president of the Australian Association of Cattle Veterinarians and the Cattle Chapter of the Australian and New Zealand College of Veterinary Scientists, and is a registered specialist in Medicine and Management of Cattle.
- Currently managing director of SBScibus providing integrated advisory services to dairy, beef and sheep properties. With 250 published articles in 2009 he was awarded the Gilruth Prize (Australian Veterinary profession’s highest honour) and in 2010 the Australian Dairy Science Award.

On this course you will learn how to:
- Critically appraise livestock feeding practices in the context of relevant production systems
- Proficiently calculate energy, protein and mineral requirements of ruminant animals in various productive states, and formulate appropriate diets with regard to the economic value of feed resources
- Understand the pathogenesis, prevention and treatment (where relevant) of metabolic diseases (including health and reproduction) of ruminants.
- Evaluate the use and effects of production modifiers in ruminants

Whether you want to work towards a qualification or simply complete individual courses, the flexibility of Massey University’s distance learning courses help take your practice to the next level, in your own time.

Course number
118.771

Credits
15 credit paper in the Master of Veterinary Medicine programme

Course features
In-depth part-time study spread over 8 months

Learning materials and facilities
- Study guide
- Electronic library access
- 3 day workshop: face-to-face or an online option for some sessions

Learning community
- Online case discussion
- Webinars

Assessment
- Written assessments
- Online participation
- Paper-based exam in a centre near you

Course requirements
- Internet access

Cost in your currency
- Australian dollars approx $5676*
- UK pounds approx £3109*
- Canadian dollars approx $5690*
- US dollars approx $5190*
- Euro approx €3785*

* Please note, all prices are approximate based on recent exchange rates and are quoted excluding Goods and Services Tax. Additional non-tuition fees also apply which vary from approx NZD$364-400.

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FOR MORE DETAILS ON PAPERS, ENROLMENT AND FEES VISIT MVM.MASSEY.AC.NZ
Welcome to Advances in Ruminant Nutrition for Veterinarians 118.771. The breadth of this topic is daunting, but the goals are to produce veterinarians capable of contributing to livestock well-being and farmer profitability in profoundly effective ways. This might well be considered a course in preventive veterinary medicine – the goal is to not treat animals, rather to prevent disease. A second goal is to have wealthy farmers.

For you the challenges will be to assimilate and integrate a large amount of fairly complex information – in some ways, nutrition is more difficult than medicine in that, there are so many unique situations in which advice must be effectively supplied. Hence, the basics are important (Module I), the applied situation must be understood (Module II) and we need an in depth knowledge of the conditions farmers expect us to provide effective help on (Module III). Your tasks are directed to providing you with the tools to take on production systems of your choice and, hopefully, to move into other systems that are less familiar as you develop skills. I look forward to the interactions ahead.

Ian Lean

OVERVIEW OF THE PAPER

Aim
Students will build on knowledge obtained in their primary veterinary qualification to gain advanced knowledge in the field of ruminant nutrition and feeding practice.

Module 1: Rumen anatomy, digestion, absorption and utilisation of nutrients
- Rumen anatomy and function
- The integration of absorbed nutrients by the liver
- Greenhouse gas emissions
- Synthesis of milk, milk fat, protein and lactose
- Comparative ruminant and equine nutrition

Module 2: Feeding systems, Feeds and evaluating production systems
- Comparative systems for evaluating nutrient requirements of livestock
- Assessing suboptimal nutrition in the dairy herd

Module 3: Metabolic diseases of Ruminants and Production modifiers
- Transition nutrition and Ketosis
- Pregnancy toxaemia, Hypomagnesaemia, Displaced abomasum and Lameness
- Milk fever
- Macro-minerals and Immune function
- Nutrition and reproduction
- Acidosis and bloat
- Production modifiers of ruminants
LEARNING MATERIALS

There are several different forms of self-study material you need to use for this paper. Each is explained in more detail in this administration guide.

Administration guide
Administrative information, information about assessments and how the course works.

Study guide
Guide to your study, explains what to read at which points in the course and how to do the course activities, includes material authored by the lecturer as well as readings from the literature.

Stream class website
Online classroom for interactions with the rest of the class and provision of electronic learning materials.

Contact course
The contact course is an optional 3 days of optional face-to-face teaching.

Assessment
Written assignment, ration formulation task, online participation and a final exam in a centre near you.