



MASSEY UNIVERSITY
COLLEGE OF SCIENCES
TE WĀHANGA PŪTAIAO

Introduction to the MVM capstone courses

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Introduction

To complete your MVM degree you have a choice of three “capstone” courses: a literature review, a research project or a practicum placement with a discipline expert. If you do not wish to complete a capstone project, you have the option of converting your degree to a Post Graduate Diploma in Veterinary Science or a Postgraduate Certificate in Science.

The aim of this guide is to give you the information you need to decide which option is best for you.

Overview of capstone courses

The capstone courses for the MVM programme are demanding courses that require you to be independent and self-directed, manage your time well and work at a high level. You are expected to acquire highly specialised knowledge, some of which is at the forefront of knowledge and a critical awareness of issues in the field of your capstone project.

Those undertaking one of the two research report papers (118.851, 118.852) need to demonstrate a high order of skill in the planning, execution and completion of a piece of original research, and apply research skills learned during the study programme to new situations. The research should be completed to internationally recognised standards and demonstrate that you have a capacity for independent thinking.

Those undertaking the practicum course (118.853) need to develop and apply new skills and techniques to existing or emerging problems, evaluate critically the findings and discussions in the literature and engage in rigorous intellectual analysis, criticism and problem-solving. You will also need to demonstrate a high order of skill in the technical reporting that is required of the discipline, complete your report(s) to internationally recognised standards and demonstrate that you have a capacity for independent thinking.

Because these courses are demanding, you need to have made good progress in your other courses before undertaking capstones. Enrolment is usually only permitted once you have completed the 4 or 5 other courses you need, but in some circumstances the timing of course offerings may mean that you complete your capstone before you have finished your last taught course. Please discuss your situation with Liz if you think this applies to you.

From your work in the taught courses you should have developed excellent skills in locating, using and evaluating research literature and in academic writing. These are skills that you will need for your capstone course.

Summary of MVM and other qualification pathways:

Taught courses	Capstone course	Degree
5 x 15 credit taught courses from the 118.7xx series	118.851 Research Report (MVM) (45 credit)	MVM
4 x 15 credit taught courses from the 118.7xx series	118.852 Research Report (MVM) (60 credit)	MVM
5 x 15 credit taught courses from the 118.7xx series	118.853 Advanced Professional Practice in Veterinary Medicine (45 credit) This option is only available to students who have obtained a B grade in each of 2 courses from the 118.7xx range	MVM
8 x 15 credit taught courses from the 118.7xx series	None required	PGDipVS
4 x 15 credit taught courses from the 118.7xx series	None required	PGCertSc

Summary of what each choice involves

118.851 Research Report (MVM) (45 credit)

This course starts in Semester 1 (February). Your final research report must be submitted by December (but can be submitted earlier). Your research report will usually be a critical literature review on a subject of veterinary medicine of your choosing.

During semester 1 you will be working as a class on your research proposal supported by a teacher. There is a Stream class website with some online activities and suggested readings. A 3-day contact workshop is scheduled early in the year (sometimes just before semester starts). It is **compulsory** to attend this contact workshop but you may do so online or in person.

During semester 2 and up until submission of your final research report you will work under the supervision of your own supervisor in completing your report.

Further details about this course are in the section on course details.

118.852 Research Report (MVM) (60 credit)

This course starts in Semester 1 (February). Your final research report must be submitted by December (but can be submitted earlier). You will identify, design, carry out and report a small clinical research project, usually performed in your own work environment, utilising retrospective or prospective examination of clinical or experimental data. It is likely that the research report will be suitable for publication in a peer-reviewed journal if the study is well designed and carefully conducted.

During semester 1 you will be working as a class on your research proposal supported by a teacher. There is a Stream class website with some online activities and suggested readings. A 3-day contact workshop is scheduled early in the year (sometimes just before semester starts). It is **compulsory** to attend this contact workshop but you may do so online or in person.

During semester 2 and up until submission of your final research report you will work under the supervision of your own supervisor in completing your project and report.

Further details about this course are in the section on course details.

118.853 Advanced Professional Practice in Veterinary Medicine (45 credit)

This course starts in Semester 1 (February). You must complete a 12 or 20 week supervised placement in an approved setting of veterinary practice working under the supervision of a specialist or other expert for a total of 300 hours (15 or 25 hours per week).

You must identify a suitable placement location and supervisor and have this approved by the Programme Director before enrolment. The placement can take place any time during the year of enrolment. Your final reports must be submitted by December (but can be submitted earlier).

Reporting requirements will involve you presenting a reflective portfolio of reports that demonstrate the experience you have gained and the knowledge and skills you have achieved.

During semester 1 you will participate in some online class activities, supported by a teacher. A 3-day contact workshop is scheduled early in the year (sometimes just before semester starts). It is **compulsory** to attend this contact workshop but you may do so online or in person.

Further details about this course are in the section on course details.

Postgraduate Diploma in Veterinary Science (PGDipVS)

If you complete eight 15 credit courses you can gain a Diploma in Veterinary Science. This is a good option for those who do not wish to undertake a capstone project. Alternative pathways for this qualification are also available. For example, you can complete a research component if you wish.

Postgraduate Certificate in Science (PGCertSc)

If you complete four 15 credit courses you can gain a Postgraduate Certificate in Science.

How capstone courses fit with subjects (endorsements)

You can complete either the MVM in a defined area of emphasis with which your qualification can be endorsed when you graduate. Currently available endorsements are Companion Animal, Companion Animal Surgery, Production Animal and Equine. There are specific 15 credit courses you must take in order to qualify for each of the endorsements and you can find out more about these at

<http://www.massey.ac.nz/massey/learning/colleges/college-of-sciences/students/mvm/what-is-mvm/endorsements.cfm>

In addition, the subject of your capstone study must also fall within the subject of your endorsement. So for example, if you intend to complete the endorsement in Companion Animal Surgery, then you must complete either a research project or a practicum within the area of companion animal surgery. If you are unsure if your planned project is suitable, please discuss it with the programme director, Liz Norman.

Staffing for 118.851, 118.852 and 118.853

You will be involved with three main staff members during your capstone project.

Nick Cave BVSc, MVSc, PhD, MANZCVS, DipACVN

Nick is a Massey staff member who will be your teacher for semester 1 and will lead the discussions and contact workshop for these courses. Your initial assigned work will be submitted to him. Nick is an enthusiastic teacher and a respected researcher with wide experience in both clinical and benchtop research in a variety of disciplines.

Supervisor

You will be assigned a Massey staff member to act as your supervisor. Where possible the staff member will have expertise in the area of your research, but this may not always be possible.

Liz Norman, Director of the Master of Veterinary Medicine programme

Pre-enrolment enquiries should be directed to Liz E.J.Norman@massey.ac.nz or Nick N.J.Cave@massey.ac.nz.

Choice of projects for research reports

It is important to recognise that the primary emphasis of the project is the **process**, and not the **product**. The process of conducting scientific research can be broken down into:

1. Formulation of a question
2. Investigation of the published literature
3. Generation of a testable hypothesis
4. Definition of research objectives
5. Conduct of the experiment or study
6. Data analysis
7. Decision to reject or accept the hypothesis, and conclusion

The definition of "experiment or study" is broad, and includes controlled clinical trials, surveys of opinions, surveys of disease prevalence, and laboratory-based testing.

Often, the initial question is posed prior to reading the relevant literature. Sometimes, a review of the literature answers the question and expunges the need to conduct the experiment. On other occasions, the review of a body of literature can reveal a gap or conflict in the current understanding, and the research question is formulated *after* the review.

Your capstone course will emphasise the skills required, the difficulties encountered, and the accepted methods to conduct each of the steps above. Thus the *topic* is not as important as the way you progress through the steps.

None-the-less, you should begin thinking about a topic for your capstone project early in your MVM degree, while you are studying your other courses. Although the process is more important than the product of the research, it will help you greatly if you identify an area of interest that will keep you engaged for the whole year you will be working on this project. Your reading of the research literature during your study of the taught courses may spark your interest in a particular area. It is quite acceptable to use a previously created assignment as the basis for a capstone topic, enlarging it in scope and depth.

You may be able to discuss potential areas for study with the Lecturer for subjects you are studying. You should also think about what type of material you come across commonly in your area of work. Day-to-day veterinary work can be rich source of suitable material. Carefully documenting and analysing your observations can make a valuable contribution to the research literature and indicate areas for further applied or interventional research by other scientists in future.

You should conduct a preliminary review of the literature to help generate or hone your initial ideas. Use your library search techniques to find a selection of suitable references, then read them, making notes of vital or especially interesting information. In particular, search for areas which are poorly understood or in which certain information is lacking or disputed. Review papers by authors of international standing are a good place to start. If after reading a collection of related papers a question occurs to you, it is likely that it is worth asking.

On enrolment in your capstone course, your work in semester 1 will assist you in developing, refining and focusing your research area so that it is suitable in size and scope, and able to be completed within the resource and ethical constraints. Lastly, it will be necessary to establish a suitable supervisor from the academic staff at Massey University as early as is possible. Time is short during this study year and the more you have organised before you begin the easier you will find it.

Enrolment procedures

Please contact Liz Norman (E.J.Norman@massey.ac.nz) or Nick Cave (N.J.Cave@massey.ac.nz) with details of your proposed topic for research report courses. For practicum course enrolments please contact Liz Norman (E.J.Norman@massey.ac.nz) with details of the practicum placement you have arranged.

Enrolments for capstones occur once a year, for a Semester 1 start (ie around October the year before). You should begin enrolment as early as possible to ensure your project is approved and enrolment is complete well before semester starts.

Indicative costs of the capstone courses

The cost of courses is proportional to their credit value, so the capstone courses are more expensive than your other courses. You can find out fee information at

http://www.massey.ac.nz/massey/learning/colleges/college-of-sciences/students/mvm/how-to-enrol/enrolment-fees/enrolment-fees_home.cfm

Course details—118.851 Research Report (MVM) (45 credit)

Course Prescription

A detailed examination of a specific topic within the field of study of the candidate, approved by the course co-ordinator in advance, which may include aspects of original research, problem investigation, and/or study of pre-existing data or published literature.

Relationship to Graduate Profile of Primary Qualification

This course enables students to integrate and contextualise the learning gained in the taught components of the programme and to demonstrate their achievement of all the generic and discipline specific attributes of the graduate profile.

Learning Outcomes

Students who successfully complete this course will be able to:

1. Apply the principles of evidence-based veterinary medicine to critically evaluate the literature in a selected area of veterinary science or veterinary practice.
2. Integrate these skills to identify promising areas for research, generate realistic research questions and select an appropriate research design. Plan, in detail, the methods of data collection, analysis and evaluation for a selected research design. Prepare a sound proposal for a research project in an area of veterinary science or veterinary practice.
3. Identify animal and human ethical issues that must be considered in designing research in veterinary science and veterinary practice and resolve any ethical issues arising from the proposed research.
4. Plan and conduct a research study, develop clear and justifiable conclusions and communicate the findings clearly to a scientific audience using appropriate conventions in a research report.

Learning activities

Learning Experiences	Participation	Link to learning outcome numbers
Contact workshop	attendance compulsory but may be either in-person or online	1, 2, 3
Online ethics discussion	compulsory	2
Research	compulsory	1, 2, 3, 4

Anticipated hours of learning

Contact workshop	18 hours
Online participation	10 hours
Research	422 hours
Total	450 hours

Assessments

Assessment Type	Completion	Weighting	Links to learning outcome numbers
Research proposal	compulsory	0%	1, 2, 3
Online discussion of ethical scenarios	compulsory	0%	3
Dissertation	compulsory	100%	1, 2, 3,4

Please note: Assessment weightings are subject to change until the beginning of the semester in which the course is delivered.

Performance Criteria

To pass this course students must:

- Obtain at least a B grade in the research proposal assignment
- Attend the contact workshop (either in-person or online)
- Participate in the online ethics discussion to a level satisfactory to the course co-ordinator
- Achieve at least 50% in the final assessment (dissertation).

Course details—118.852 Research Report (MVM) (60 credit)

Course Prescription

A detailed examination of a specific topic within the field of study of the candidate, approved by the course co-ordinator in advance, which may include aspects of original research, problem investigation, and/or study of pre-existing data or published literature.

Relationship to Graduate Profile of Primary Qualification

This course enables students to integrate and contextualise the learning gained in the taught components of the programme and to demonstrate their achievement of all the generic and discipline specific attributes of the graduate profile.

Learning Outcomes

Students who successfully complete this course will be able to:

1. Apply the principles of evidence-based veterinary medicine to critically evaluate the literature in a selected area of veterinary science or veterinary practice.
2. Integrate these skills to identify promising areas for research, generate realistic research questions and select an appropriate research design. Plan, in detail, the methods of data collection, analysis and evaluation for a selected research design. Prepare a sound proposal for a research project in an area of veterinary science or veterinary practice.
3. Identify animal and human ethical issues that must be considered in designing research in veterinary science and veterinary practice and resolve any ethical issues arising from the proposed research.
4. Plan and conduct a research study, develop clear and justifiable conclusions and communicate the findings clearly to a scientific audience using appropriate conventions in a research report.

Learning activities

Learning Experiences	Participation	Link to learning outcome numbers
Contact workshop	attendance compulsory but may be either in-person or online	1, 2, 3
Online ethics discussion	compulsory	2
Research	compulsory	1, 2, 3, 4

Anticipated hours of Learning

Contact workshop	18 hours
Online participation	10 hours
Research	572 hours
Total	600 hours

Assessments

Assessment Type	Completion	Weighting	Links to learning outcome numbers
Research proposal	compulsory	20%	1, 2, 3
Online discussion of ethical scenarios	compulsory	0%	3
Dissertation	compulsory	80%	1, 2, 3, 4

Please note: Assessment weightings are subject to change until the beginning of the semester in which the course is delivered.

Performance Criteria

To pass this course students must:

- Obtain at least a B grade in the research proposal assignment
- Attend the contact workshop (either in-person or online)
- Participate in the online ethics discussion to a level satisfactory to the course co-ordinator
- Achieve at least 50% in the final assessment (dissertation).

Course details—118.853 Advanced Professional Practice in Veterinary Medicine (45 credit)

Course Prescription

A supervised placement in an approved setting of veterinary practice. Students will observe the work of experts in the selected area of veterinary practice, undertake some work under supervision, and gain experience in using the empirical literature to guide evidence-based decision making and writing reports in the discipline.

Relationship to Graduate Profile of Primary Qualification

This course enables students to integrate and contextualise the learning gained in the taught components of the programme and to demonstrate their achievement of all the generic and discipline specific attributes of the graduate profile.

Entry Limitations and prerequisites

Students must identify a placement location and supervisor and have this approved by the Programme Director before enrolment.

Students must have obtained at least a B grade in two courses from the 118.7xx range (previously numbered 195.7xx).

Learning Outcomes

Students who successfully complete this course will be able to:

1. Practice reflectively, with an advanced level of skill and increased expertise in a selected area of veterinary science
2. Critically evaluate the literature and the evidence basis for practice in a selected area of veterinary science. Communicate the findings clearly to a scientific audience using appropriate conventions in a report style appropriate to the selected area of veterinary practice.
3. Identify and discuss animal and human ethical issues that must be considered in designing research in veterinary science and veterinary practice.

Learning activities

Learning Experiences	Participation	Link to learning outcome numbers
Contact workshop	attendance compulsory but may be either in-person or online	2, 3
Online ethics discussion	compulsory	3
Case log	compulsory	1
Report(s)	compulsory	1, 2

Anticipated hours of Learning

Professional practice	300 hours
Contact workshop	18 hours
Online participation	10 hours
Report and activity log	122 hours
Total	450 hours

Assessments

Assessment Type	Completion	Weighting	Links to learning outcome numbers
Reflective portfolio	compulsory	90%	1, 2
Supervisor's report	compulsory	10%	1
Online discussion of ethical scenarios	compulsory	0%	3

Please note: Assessment weightings are subject to change until the beginning of the semester in which the course is delivered.

Performance Criteria

To pass this course students must:

- Attend the contact workshop (either in-person or online)
- Participate in the online ethics discussion to a level satisfactory to the course co-ordinator
- Achieve at least 50% in each of the contributing assessments (activity log, supervisors report and final report(s)).