

## Contents

lm	portant information regarding the Programme Regulations	2
	ernative Assessments during the Coronavirus (COVID-19) Outbreak	
1	Structure of the programmes	5
2	Registration	6
3	Recognition of prior learning and credit transfer	8
4	Module selection	9
5	Assessment for the programme	9
6	Number of attempts permitted at an assessment element	12
7	Progression within the programme	13
8	Schemes of award	16
Appendix A – Structure of the programmes		19
Арре	endix B - Module descriptions	24
Арре	endix C – RVC Common Grading Scheme – Essay questions	34
Арре	endix D – RVC Common Grading Scheme – Research project reports	45
Арре	endix E – Assessment Criteria – MSc Research Project Oral examination	52
Anne	endix F - Assessment Criteria - Short answer questions and problem solving	55

# Important information regarding the Programme Regulations

#### Last revised 01 December 2020

As a student registered with the University of London you are governed by the current General Regulations and Programme Regulations associated with your programme of study.

These Programme Regulations are designed and developed by the Royal Veterinary College (RVC) which is responsible for the academic direction of the programme. The regulations take account of any associated arrangements at the RVC. Programme Regulations, together with the <a href="Programme">Programme</a> Handbook, will provide the detailed rules and guidance for your programme of study.

In addition to Programme Regulations you will have to abide by the <u>General Regulations</u>. These regulations apply to all students registered for a programme of study with the University of London and provide the rules governing registration and assessment on all programmes; they also indicate what you may expect on completion of your programme of study and how you may pursue a complaint, should that be necessary. Programme Regulations should be read in conjunction with the General Regulations.

The relevant General Regulations and the Programme Regulations relating to your registration with us are for the current year and not the year in which you initially registered.

On all matters where the regulations are to be interpreted, or are silent, our decision will be final.

Further information about your programme of study is outlined in the Programme Specification which is available on the relevant Courses page of the website. The Programme Specification gives a broad overview of the structure and content of the programme as well as the learning outcomes students will achieve as they progress.

#### **Terminology**

The following language is specific to the Livestock Health and Production and the Veterinary Epidemiology and Public Health programmes:

**Module:** Individual units of a programme are called modules. Each module is a self-contained, formally structured learning experience with a coherent and explicit set of learning outcomes and assessment criteria

**TMA:** A Tutor Marked Assignment. These are a component of each module other than the Research project. They take the form of a written assignment or short answer paper, as specified by each module, and carry a weighting of 20% of the overall pass mark for the module.

Throughout the Regulations, 'we' 'us' and 'our' mean the University of London; 'you' and 'your' mean the student, or where applicable, all students.

If you have a query about any of the programme information provided please contact us. You should use the *ask a question* button in the Student portal

### **Changes to the 2020 Programme Regulations**

- 1. Clarification where two TMAs are submitted for a first attempt only the higher mark is counted to calculate the final mark.
- 2. Where a student does not achieve an overall mark of 50% for a module but achieves a mark of 50% in the written examination element they will be able to submit one further TMA.
- 3. The following courses have been withdrawn: Sustainable livestock farming in the environment [LHM020]
  - Reproduction and fertility a species approach [LHM009]
- 4. The title of Research design, management and grant application writing [LVM014] has been changed to Research design and methods [LVM014]. The content and study materials are undergoing revision.

If you registered, but did not enter or attempt the assessment for this module in 2020 or earlier you will register for the module with the new name.

If you attempted and failed one or both elements of assessment in 2020 or earlier you will have access to the new learning materials to sit the assessment.

If you attempted and passed the module in 2020 or earlier you may not attempt the new module.

# Alternative Assessments during the Coronavirus (COVID-19) Outbreak

In line with our current General Regulations, the University may offer you alternative assessments where necessary. This includes holding online timed assessments in place of written examinations, which are usually held at examination centres. Please note that this statement replaces any published information relating to assessments or written examinations in any of our materials including the website. Previously published materials relating to examinations should therefore be read in conjunction with this statement.

The University of London continues to work towards supporting the academic progression of all its students. The University also continues to be mindful of the health and wellbeing of its students during this pandemic, whilst protecting the academic standards of its awards.

# 1 Structure of the programmes

See <u>Appendix A</u> for the structure of the MSc degrees, Postgraduate Diplomas, Postgraduate Certificates and the full list of Individual modules that may be taken on a stand-alone basis.

See Appendix B for the module outlines (syllabuses).

#### Qualifications

#### 1.1

The following named qualifications are awarded under the Livestock Health and Production and Veterinary Epidemiology and Public Health programmes:

- MSc Livestock Health and Production
- Postgraduate Diploma in Livestock Health and Production
- Postgraduate Certificate in Livestock Health and Production
- MSc Veterinary Epidemiology and Public Health
- Postgraduate Diploma in Veterinary Epidemiology and Public Health
- Postgraduate Certificate in Veterinary Epidemiology and Public Health

#### **Qualification structure**

#### 1.2

The MSc Livestock Health and Production consists of seven modules, as follows:

- three compulsory core modules;
- four further optional modules from a selection.

#### 1.3

The Postgraduate Diploma in Livestock Health and Production consists of four modules, as follows:

- one compulsory core module;
- one further core module;
- two optional modules.

#### 1.4

The Postgraduate Certificate in Livestock Health and Production consists of two modules, as follows:

- one compulsory core module;
- one further core module.

#### 1.5

The MSc Veterinary Epidemiology and Public Health consist of seven modules, as follows:

- · three compulsory core modules;
- four further optional modules from a selection.

#### 1.6

The Postgraduate Diploma in Veterinary Epidemiology and Public Health consists of four modules, as follows:

- two compulsory core modules;
- two optional modules.

#### 1.7

The Postgraduate Certificate in Veterinary Epidemiology and Public Health consists of two modules, as follows:

two compulsory core modules.

#### **Individual modules**

#### 1.8

You may apply to register for one or more Individual modules on a stand-alone basis, either instead of, or at the same as registering for the MSc, Postgraduate Diploma or Postgraduate Certificate in either Livestock Health and Production or Veterinary Epidemiology and Public Health.

#### 1.9

Each Individual module accommodates either 35, 50 or 240 notional study hours.

#### 1.10

You may take any number of Individual modules, but a maximum of two relevant 240-hour Individual modules may count as credit towards a Postgraduate Diploma or MSc degree, or one relevant 240-hour Individual module may be counted towards a Postgraduate Certificate.

# 2 Registration

### Effective date of registration

#### 2.1

If you are registering for an MSc degree, a Postgraduate Diploma, a Postgraduate Certificate or a 240-hour Individual module your effective date of registration will be 1 January in the year that you initially registered. This allows you to sit your first examinations in October of the same year.

#### 2.2

If you are registering for a 50- or 35-hour Individual module your effective date of registration will be the date that you complete registration.

#### 2.3

If there is a limit to the number of students who can be registered each year, the registration of an applicant will only be confirmed if there is a place available for that study year. An applicant whose registration is not confirmed will be made an offer of registration for the following year.

# Period of registration

#### 2.4

The minimum and maximum periods of registration, counted from your effective date of registration, are:

Livestock Health and Production, and Veterinary Epidemiology and Public Health	Minimum	Maximum
MSc degrees	2 years	5 years
Postgraduate Diploma	2 years	5 years
Postgraduate Certificate	1 year	5 years
240-hour Individual modules	1 year	2 years
50-hour Individual modules	None	1 year
35-hour Individual modules	None	1 year

#### 2.5

We will only grant an extension to the maximum period of registration in exceptional circumstances. If we allow an extension to your period of registration we will review the currency of the modules that you have completed and decide whether you may transfer the modules. Any extension to the maximum period of registration will be at the Programme Director's discretion.

# Period of registration when progressing from a 240-hour Individual module

2.6

If you successfully pass a 240-hour Individual module and we allow you to progress and transfer your registration to a Postgraduate Certificate, a Postgraduate Diploma or an MSc degree, we will give you a new effective date of registration and a new maximum period of registration of five years.

# Period of registration when progressing from a Postgraduate Certificate or Postgraduate Diploma

#### 2.7

You must complete your studies within the maximum period of five years, which includes any progression between levels of award (i.e. transfer to the PGDip or MSc). If you transfer to the next level of award, your initial registration date will remain unchanged (i.e. the date when you first registered for your original programme).

# Registering after accepting an award

#### 2.8

For both Livestock Health and Production and Veterinary Epidemiology and Public Health, if you have:

- accepted the award of the Postgraduate Certificate, we will not allow you to register subsequently for, or be awarded, the Postgraduate Diploma or the MSc degree;
- accepted the award of the Postgraduate Diploma, we will not allow you to register subsequently for, or be awarded, the MSc degree.

### Registering afresh

#### 2.9

If you register afresh, we will not allow you to carry credit for any subjects previously passed, either to the programme concerned or, in the event of a subsequent transfer, to another programme.

#### 2.10

If we terminated your registration because you exhausted the maximum number of examination attempts while registered previously for either the Livestock Health and Production or Veterinary Epidemiology and Public Health programme, we will not allow you to register again for either programme.

#### Transferring registration between the programmes

#### 2.11

If you satisfy the rules of progression you may transfer your registration from the:

- MSc Livestock Health and Production to the MSc Veterinary Epidemiology and Public Health and vice versa;
- Postgraduate Diploma in Livestock Health and Production to the Postgraduate Diploma in Veterinary Epidemiology and Public Health and vice versa;
- Postgraduate Certificate in Livestock Health and Production to the Postgraduate Certificate in Veterinary Epidemiology and Public Health and vice versa.

# 3 Recognition of prior learning and credit transfer

To be read in conjunction with the **General Regulations**, Section 3.

### Recognition of prior learning

#### 3.1

We will consider applications for recognition and accreditation of prior learning (RPL) on a discretionary basis.

#### **Credit transfer**

#### 3.2

We will consider applications for credit transfer from students and graduates of the University of London to the Livestock Health and Production and Veterinary Epidemiology and Public Health programmes on a discretionary basis.

### 4 Module selection

Appendix A provides details of the programme structures and module titles.

# **Changing modules**

#### 4.1

We will consider applications to change an optional module(s) on an individual basis. It may not be possible to allow you to change your choice of module, particularly after we have despatched study materials.

#### 4.2

If you are registered for the Postgraduate Diploma or the MSc degree, and you have entered the examination for a module which you then wish to change, we will not consider your request to change the module until the results for that session are published.

# 5 Assessment for the programme

In line with our current General Regulations, the University may offer you alternative assessments where necessary. This includes holding online timed assessments in place of written examinations, which are usually held at examination centres. Please refer to Programme Specifications for details on equipment that may be required for alternative assessments.

# Assessment methods for all modules for the MSc degree, PGDip, PGCert and 240 hour Individual modules

#### 5.1

Each module, except for the Research project, will be assessed by one three-hour unseen written examination (80%) and by one Tutor marked assignment (TMA) (20%).

### Tutor marked assignments (TMAs)

#### 5.2

TMAs will take the form of written work specified in the study materials for each module.

#### 5.3

You must submit one TMA and you may choose to submit a maximum of two TMAs for assessment per module.

#### 5.4

If you submit more than one TMA for your first attempt at a module, the mark for the best TMA will count when calculating the overall mark for the module.

#### 5.5

To prepare you for completion of your TMAs you will be expected to participate in online module tutorials and webinars. Participation statistics are collected and monitored. Details of scheduled dates will be communicated via RVC Learn.

#### 5.6

In your first year of registration you are expected to participate in two academic tutorials which will prepare you for the completion of TMAs. The tutorials cover understanding plagiarism and TMA completion. Details of scheduled dates will be communicated via RVC Learn.

#### 5.7

You must submit TMAs according to the dates and guidelines provided in the Programme handbook, with at least one TMA being submitted by the Compulsory deadline, in order to be eligible for examination entry. However, the TMA and written examination do not have to be attempted in the same year, as students can apply to defer the examination.

#### 5.8

If you fail to complete the annual continuing registration process by the deadline given, you will not be permitted access to RVC Learn.

See the Section 1 of the General Regulations for more information on continuing your studies.

#### 5.9

All TMAs should be new pieces of work. However, should you choose to re-use previously submitted work in a subsequent TMA you must reference the original use of that work, and comply with the regulations governing plagiarism.

### Assessment methods for the Research project

You are strongly advised to study Research design and methods [LVM014] prior to undertaking the Research project [LVM200]. Until 2021 Research design and methods [LVM014] was known as Research design, management and grant application writing.

#### 5.10

The Research project (MSc degree only) is assessed by a research paper written in the style required by an identified scientific journal (80%) and an oral examination (20%).

The research proposal will not form part of the final assessment. However, if you do not submit a research proposal we will not allow you to submit the Research project.

Deadlines for the research proposal are listed below in <u>regulation 5.12</u>. Full information is available on the VLE.

#### 5.11

Students registered on the Research project will be required to take an oral examination conducted either face-to-face or by Skype or telephone in November/December; there is no requirement to come to London.

#### 5.12

The following dates apply to the Research project:

- By 30 September in the year prior to undertaking the Research project you are required to submit to the Programme Director for approval, a research outline of approximately 800 words in length.
- By 15 December in the year prior to undertaking the Research project you will be advised of the outcome of your research outline. If the Programme Director approves the outline, you may then register and prepare a detailed research proposal (1500 words). If the proposal is not approved, the Programme Director will offer guidance as to how to revise it for approval.
- By 7 January you must submit your research proposal for review by the Programme Director and an appropriate subject expert.

- By 31 January once the proposal has been approved, an RVC supervisor will be selected. Between February and August you will be expected to conduct your research.
- During May the supervisor will conduct a mid-term assessment of your progress. You will be expected to write up your research in the form of a literature review and a scientific report for publication.
- By 31 October the completed research paper must be submitted electronically to the
  Distance Learning Office at the Royal Veterinary College. A paper sent after the deadline will
  not normally be considered. An extension to the Research project will be at the discretion of
  the Programme Director.

### Deadlines and late submission of a TMA or Research project

The deadlines for the TMAs and Research project are in the Programme handbook, available on the VLE.

If you think that you might miss the deadline for submitting a TMA or a Research project, follow the advice in the Programme handbook.

#### 5.13

If you submit a TMA or a Research project after the deadline, penalties for late submission will be applied as described in the Programme handbook.

#### 5.14

If we receive a TMA after the Optional TMA deadline given in the Programme handbook, the mark and feedback for the TMA may not be available before you have taken the related written examination.

#### 5.15

In order to take an examination, you must submit at least one TMA before the Compulsory TMA deadline for that year. Failure to do so will result in your examination entry for that year being withdrawn. However, if you submitted a TMA in a previous year and then deferred your entry to the written examination, you do not have to submit a further TMA in order to take the examination.

See the website for the <u>list of examination centres.</u> See <u>Section 5: Assessment for the programme</u> for information on alternative assessments where necessary.

#### 5.16

Written examinations take place in October each year.

#### **Passing Assessments**

#### 5.17

To pass a module, including the Research project, you must attempt all elements of assessment. You will pass the module if the combined weighted mark for all elements is at least 50%.

#### Assessment methods for the 35- and 50-hour Individual modules

### 5.18

Each 35-hour individual module will be assessed by a short answer paper or written TMA.

#### 5.19

Each 50-hour Individual module will be assessed by a written TMA.

See General Regulations for Rules for taking written examinations

# 6 Number of attempts permitted at an assessment element

### Maximum number of attempts

#### 6.1

The maximum number of attempts permitted for any element of assessment is two.

### Retaking an element of assessment

#### 6.2

If you do not achieve the combined weighted mark of at least 50% for a module, you must retake any failed elements of assessment, provided you do not exceed the maximum number of attempts for that examination.

#### 6.3

You will not be allowed to retake any element of assessment that you have passed. The marks of any passed element of assessment will be carried forward and used for classification.

#### 6.4

If you retake an assessment, your most recent mark will be used to calculate your final classification.

## 6.5

If you are required to retake a written examination you may reuse the mark you received for the TMA. Alternatively, if you have not already submitted two TMAs for the module, you may submit one further TMA.

See regulation 5.3 for the maximum number of TMAs that you may submit per module.

#### 6.6

If you do not achieve an overall pass mark of at least 50% for the module, but you have achieved a mark of 50% for the written examination you may submit one further TMA, this applies even where you have previously submitted two TMAs for your first attempt (up to a maximum of three TMA's).

See <u>regulation 5.4</u> for how TMA attempts are counted when calculating the overall mark for the module.

### Capping of marks for retakes

#### 6.7

If you make a second attempt at an element of assessment, the overall mark given for the module will be capped at 50%. This capping applies to the overall mark for the module and not to the individual marks given for the written examination, TMA, Research project or oral examination.

### Retaking a Research project

#### 6.8

If you submit a Research project which is awarded between 0.0–49.9%, it will be at the discretion of the Board of Examiners to determine whether you will be required to amend, redraft, extend your original project submission or whether you will be required to undertake an entirely new project. See the Programme handbook for further guidance.

#### 6.9

If you fail the Research project paper component, then both the paper and any associated oral examination will need to be retaken.

If the Research project proposal was approved prior to the paper submission it would not be expected that this would need to be resubmitted.

# Failure at a second attempt

#### 6.10

If you fail to achieve an overall combined mark of 50% for any module at your second attempt, your registration will cease and you will not be permitted to re-register for further study on this programme.

# 7 Progression within the programme

See Section 5 for method of assessment.

### General rules of progression

#### 7.1

You do not have to enter examinations every year. Within the limits set by the regulations and the minimum and maximum registration periods, you may decide:

- when to be examined,
- the number of modules to attempt each year and
- the order in which modules are examined.

## 7.2

You may register for a maximum of four modules, excluding re-sits. If you enter written examinations in any year you may attempt examinations in a minimum of one module and a maximum of four modules, excluding re-sits.

#### 7.3

If you are allowed to progress, in either the Livestock Health and Production or the Veterinary Epidemiology and Public Health programmes, you will be credited with the modules successfully passed.

# General rules of progression, if registered for the Postgraduate Certificate, Postgraduate Diploma or MSc

You must have passed Statistical methods in veterinary epidemiology [VPM012] before taking Advanced statistical methods in veterinary epidemiology [VPM013].

Students are strongly advised to study Research design and methods [LVM014] before taking the Research project [LVM200]. Until 2021 Research design and methods [LVM014] was known as Research design, management and grant application writing.

#### 7.4

For the Postgraduate Diploma and MSc degree you must have registered, or be concurrently registered, for all of the compulsory core modules before we will allow you to register for optional modules.

#### 7.5

Previous attempts at the assessments for modules of the Postgraduate Certificate or Postgraduate Diploma, will count towards the maximum number of attempts permitted for those modules, if you progress to the Postgraduate Diploma or MSc degree respectively.

# Progression from the Postgraduate Certificate to the Postgraduate Diploma or MSc degree 7.6

To progress from the:

- Postgraduate Certificate to the Postgraduate Diploma or MSc Livestock Health and Production, or from the
- Postgraduate Certificate to the Postgraduate Diploma or MSc Veterinary Epidemiology and Public Health,

you must pass each of the two Postgraduate Certificate modules and receive a recommendation from the Examiners that you may proceed to the remaining modules of the respective Postgraduate Diploma or MSc degree.

#### Progression from the Postgraduate Diploma to the MSc degree

#### 7.7

To progress from the:

- Postgraduate Diploma to the MSc Livestock Health and Production, or from the
- Postgraduate Diploma to the MSc Veterinary Epidemiology and Public Health,

you must pass each of the four Postgraduate Diploma modules and receive a recommendation from the Examiners that you may proceed to the remaining modules of the MSc degree.

#### If you progress but do not complete

#### 7.8

If you pass the Postgraduate Certificate and choose to progress to the Postgraduate Diploma or MSc degree, but do not subsequently satisfy the requirements of the Postgraduate Diploma or MSc degree, then the Board of Examiners may decide to award you the Postgraduate Certificate with effect from the year that you passed the requirements of the award.

#### 7.9

If you pass the Postgraduate Diploma and choose to progress to the MSc degree, but do not subsequently satisfy the requirements of the MSc degree, then the Board of Examiners may decide to award you the Postgraduate Diploma with effect from the year that you passed the requirements of Postgraduate Diploma.

#### 7.10

If you accept the award of the Postgraduate Certificate or the Postgraduate Diploma you will not be permitted to register at a later date for either the Postgraduate Diploma or the MSc degree for either of the programmes in Livestock Health and Production or Veterinary Epidemiology and Public Health.

#### 7.11

If you pass the Postgraduate Certificate or the Postgraduate Diploma, and are invited to transfer your registration to the Postgraduate Diploma or MSc degree, but do not notify us of your decision within your period of registration, you may be granted the award that you passed with effect from the year that you passed it.

#### **Progression from 240-hour Individual modules**

#### 7.12

Progression may be permitted from a 240-hour Individual module(s) to one of the following related awards:

- Postgraduate Certificate in Livestock Health and Production
- Postgraduate Diploma in Livestock Health and Production
- MSc Livestock Health and Production
- Postgraduate Certificate in Veterinary Epidemiology and Public Health
- Postgraduate Diploma in Veterinary Epidemiology and Public Health
- MSc Veterinary Epidemiology and Public Health.

#### 7.13

If we allow you to progress from a 240-hour Individual module(s) to one of the related awards, and you would like the completed Individual module(s) to contribute to the new award, you must apply within three years of completing the Individual module(s). If permitted, the mark achieved for the Individual module(s) may contribute to the related award.

#### 7.14

If we allow you to progress from an Individual module(s) to one of the related awards, we may allow you to transfer a maximum of two 240-hour Individual modules if registering for the Postgraduate Diploma or MSc degree, or one 240-hour Individual module if registering for the Postgraduate Certificate. A condition of the transfer is that the Individual module(s) you have successfully passed forms part of the structure of the degree, diploma or certificate to which you wish to transfer.

#### 7.15

If we allow you to transfer and give you credit on the basis of modules previously passed, we will not allow you to re-enter the examination for those modules. The marks obtained for the assessments will contribute towards your final qualification as appropriate.

### Progression from 35- and 50-hour Individual modules

#### 7.16

There is no progression from the 35-hour Individual modules to the 50-hour or 240-hour Individual modules or the related qualifications, and there is no progression from the 50-hour Individual modules to the 240-hour Individual modules or related qualifications. Students of the 35- and 50-hour Individual modules who wish to register for the Postgraduate Certificate, Postgraduate Diploma or MSc should make an application in the normal way.

### 8 Schemes of award

# MSc degree, Postgraduate Diploma and Postgraduate Certificate

See the assessment criteria in <u>Appendix C</u> and <u>Appendix D</u> for information on how to achieve a particular mark. See <u>Section 6</u> for capping of marks if you retake an assessment.

#### 8.1

The Board of Examiners normally awards the MSc degree, Postgraduate Diploma or Postgraduate Certificate in accordance with the marks and ranges described in the Scheme of Award. However, the Board of Examiners may also decide to consider a student's overall performance.

#### 8.2

The overall mark for each module, except for the Research project [LVM200], is calculated using a ratio of the marks achieved for the unseen written examination (80%) and the TMA (20%). The highest mark of the submitted TMAs counts towards the overall mark.

#### 8.3

The overall mark for the Research project [LVM200] is calculated using a ratio of the marks achieved for the research paper (80%) and the oral examination (20%).

### 8.4

The overall pass mark for each module is 50% or above.

### 8.5

To be considered for the award of the MSc degree, you must attempt and pass seven modules.

#### 8.6

To be considered for the award of the Postgraduate Diploma, you must attempt and pass four modules.

## 8.7

To be considered for the award of the Postgraduate Certificate, you must attempt and pass two modules.

#### **Distinction and Merit**

#### 8.8

The MSc degree, Postgraduate Diploma and Postgraduate Certificate will be awarded with Distinction if you receive an overall combined average mark of 70% or above, with no module having received a mark of less than 60%, at the first attempt.

#### 8.9

The MSc degree, Postgraduate Diploma and Postgraduate Certificate will be awarded with Merit if you receive an overall combined average mark in the range of 65–69%, with no module having received a mark of less than 50%, at the first attempt.

#### **Exit awards**

#### 8.10

If you registered for the MSc degree in Livestock Health and Production, but do not pass in the seven modules that comprise the MSc, the Board of Examiners may decide to grant you either the Postgraduate Diploma or the Postgraduate Certificate in Livestock Health and Production provided that you have passed the four modules that comprise the Postgraduate Diploma or the two modules that comprise the Postgraduate Certificate.

#### 8.11

If you registered for the Postgraduate Diploma in Livestock Health and Production, but do not pass in the four modules that comprise the Postgraduate Diploma, the Board of Examiners may decide to grant you the Postgraduate Certificate in Livestock Health and Production provided that you have passed the two modules that comprise the Postgraduate Certificate.

#### 8.12

If you registered for the MSc Veterinary Epidemiology and Public Health, but do not pass in the seven modules that comprise the MSc, the Board of Examiners may decide to grant you either the Postgraduate Diploma or the Postgraduate Certificate in Veterinary Epidemiology and Public Health provided that you have passed the four modules that comprise the Postgraduate Diploma or in the two modules that comprise the Postgraduate Certificate.

#### 8.13

If you are registered for the Postgraduate Diploma in Veterinary Epidemiology and Public Health, but do not pass in the four modules that comprise the Postgraduate Diploma, the Board of Examiners may decide to grant you the Postgraduate Certificate in Veterinary Epidemiology and Public Health provided that you have passed the two modules that comprise the Postgraduate Certificate.

#### Individual modules

See the assessment criteria in <u>Appendix C</u> for information on how to achieve a particular mark for 240- and 50-hour Individual modules.

See the assessment criteria in Appendix F for information on how to achieve a particular mark for 35-hour Individual modules.

#### 8.14

The overall pass mark for a 50-hour or 240-hour individual module is 50%.

#### 8.15

A mark or grade awarded for a 240-hour Individual module will not replace any mark or grade for a degree or diploma already awarded.

#### 8.16

The mark awarded for the 35-hour Individual modules is based on completion of either a short answer paper or written TMA (100%).

# 8.17

The mark awarded for the 50-hour Individual modules is based on completion of the TMA only (100%).

# Appendix A – Structure of the programmes

A detailed outline of the syllabus for each module is provided on the <u>course pages</u>, under the Programme structure tab.

# Postgraduate Certificate in Livestock Health and Production

## One compulsory core module:

• Animal disease (current concepts) [LHM001]

+

#### One further core module from:

- Developing and monitoring of livestock production systems [VPM018]
- Principles of livestock production [LHM002]

# Postgraduate Diploma in Livestock Health and Production

# One compulsory core module:

Animal disease (current concepts) [LHM001]

+

#### One further core module from:

- Developing and monitoring of livestock production systems [VPM018]
- Principles of livestock production [LHM002]

+

### Two optional modules chosen from:

- Developing and monitoring of livestock production systems (if not taken as a core module)
   [VPM018]
- Principles of livestock production (if not taken as a core module) [LHM002]
- Animal welfare [LHM016]
- Economics for livestock development and policy [LVM019]
- Epidemiology and animal health economics [LVM004]
- Management of infectious disease outbreaks in animal populations [LVM017]
- Research design and methods [LVM014] ▼
- Veterinary public health [LVM006]
- ▼ Until 2021 this module was known as Research design, management and grant application writing

## **MSc Livestock Health and Production**

### Three compulsory core modules:

- Animal disease (current concepts) [LHM001]
- Developing and monitoring of livestock production systems [VPM018]
- Principles of livestock production [LHM002]

+

# Four optional modules chosen from:

- Animal welfare [LHM016]
- Economics for livestock development and policy [LVM019]
- Epidemiology and animal health economics [LVM004]
- Management of infectious disease outbreaks in animal populations [LVM017]
- Research design and methods [LVM014] ▼
- Research project in livestock health and production [LVM200]
- Veterinary public health [LVM006]
- ▼ Until 2021 this module was known as Research design, management and grant application writing

# Postgraduate Certificate in Veterinary Epidemiology and Public Health

### Two compulsory core modules:

- Epidemiology and animal health economics [LVM004]
- Veterinary public health [LVM006]

# Postgraduate Diploma in Veterinary Epidemiology and Public Health

### Two compulsory core modules:

- Epidemiology and animal health economics [LVM004]
- Veterinary public health [LVM006]

+

### Two optional modules chosen from:

- Advanced statistical methods in veterinary epidemiology † [VPM013]
- Developing and monitoring of livestock production systems [VPM018]
- Economics for livestock development and policy [LVM019]

- Management of infectious disease outbreaks in animal populations [LVM017]
- Research design and methods [LVM014] ▼
- Statistical methods in veterinary epidemiology [VPM012]
- Surveillance and investigation of animal health [VPM015]

† To study VPM013 you will need access to ArcGIS software (version 8 or higher). The cost of the GIS software is NOT included in your module fee and you will need to purchase if you do not have access to it. Contact the Course Administrator at DLP@rvc.ac.uk for details of how to purchase ArcGIS software.

▼ Until 2021 this module was known as Research design, management and grant application writing

# **MSc Veterinary Epidemiology and Public Health**

### Three compulsory core modules:

- Epidemiology and animal health economics [LVM004]
- Statistical methods in veterinary epidemiology [VPM012]
- Veterinary public health [LVM006]

+

## Four optional modules chosen from:

- Advanced statistical methods in veterinary epidemiology † [VPM013]
- Developing and monitoring of livestock production systems [VPM018]
- Economics for livestock development and policy [LVM019]
- Management of infectious disease outbreaks in animal populations [LVM017]
- Research design and methods [LVM014] ▼
- Research project in Veterinary Epidemiology and Public Health [LVM200]
- Surveillance and investigation of animal health [VPM015]

† To study VPM013 you will need access to ArcGIS software (version 8 or higher). The cost of the GIS software is NOT included in your module fee and you will need to purchase if you do not have access to it. Contact the Course Administrator at DLP@rvc.ac.uk for details of how to purchase ArcGIS software.

▼ Until 2021 this module was known as Research design, management and grant application writing

### Individual modules

The following Individual modules are available to study on a stand-alone basis:

#### 35-hour Individual modules

- Animal disease modelling [LVM334]
- Principles of farm animal economic analysis [LVM319]
- Tools for economic analysis [LVM320]
- Diagnostic decision making and epidemiological disease information management [LVM323]
- Welfare issues in systems involving confinement [LVM303]
- Welfare issues in extensive farming systems [LVM304]
- Animal transport and slaughter critical welfare considerations [LVM305]
- Animal health analysis and database management on farms (formerly known as Database management at farms). [LVM333]

#### 50-hour Individual modules

- Advanced risk analysis using @RISK software [LVM501]
- Herd health management [LVM502]
- Animal disease surveillance [LVM503]
- Introduction to veterinary public health, risk analysis and risk assessment [LVM506]
- Zoonoses of parasitic, bacterial and viral origin [LVM507]
- Principles of food safety control and 'farm to fork' concept [LVM508]
- Control of food safety: red meat, poultry, eggs, milk and milk products [LVM509]
- Development of a disease control programme: salmonella in pigs and bovine TB [LVM510]
- Introduction to statistics, hypothesis testing, study design and analysis of data [LVM511]
- Principles, methodology and sampling in epidemiological investigations [LVM512]
- Design and analysis of epidemiological investigations observational and intervention studies [LVM513]
- Tools for economic analysis in epidemiology [LVM515]

#### 240-hour Individual modules

- Animal disease (current concepts) [LHM001]
- Principles of livestock production [LHM002]
- Developing and monitoring of livestock production systems [VPM018]
- Epidemiology and animal health economics [LVM004]
- Veterinary public health [LVM006]

- Economics for livestock development and policy [LVM019]
- Statistical methods in veterinary epidemiology [VPM012]
- Animal welfare [LHM016]
- Advanced statistical methods in veterinary epidemiology [VPM013]†
- Management of infectious disease outbreaks in animal populations [LVM017]
- Research design and methods [LVM014] ▼
- Surveillance and investigation of animal health [VPM015]

† To study Advanced statistical methods in veterinary epidemiology you will need access to ArcGIS software (version 8 or higher). The cost of the GIS software is NOT included in your module fee and you will need to purchase if you do not have access to it. Contact the Course Administrator at DLP@rvc.ac.uk for details of how to purchase ArcGIS software.

▼ Until 2021 this module was known as Research design, management and grant application writing

# Appendix B – Module descriptions

# Postgraduate Certificate, Postgraduate Diploma, MSc degree and 240-hour Individual modules

## Advanced statistical methods in veterinary epidemiology [VPM013]

You must have passed Statistical Methods in Veterinary Epidemiology [VPM012] before taking Advanced Statistical Methods in Veterinary Epidemiology [VPM013].

To study Advanced Statistical Methods in Veterinary Epidemiology [VPM013] you need access to ArcGIS software (version 8 or higher). The cost of the software is not included in the course fees. Contact the Course Administrator at DLP@rvc.ac.uk for details of how to purchase ArcGIS software.

This course will provide an introduction to advanced methods of statistical modelling of epidemiological data.

### Subject areas:

- · analysis of spatial data
- advanced aspects of multivariable regression analysis
- analysis of correlated data; meta-analysis and
- systematic reviews

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Animal disease (current concepts) [LHM001]

This course will enable the student to appreciate the external and internal components of health-agents of disease and how animals respond to them, at an individual and population level.

### Subject areas:

- Immunology
- Parasitology
- Microbiology
- Introduction to veterinary epidemiology
- Principles of veterinary pathology

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

### **Animal welfare [LHM016]**

This course will provide a comprehensive appreciation of welfare and ethical issues connected with farm animal practice, animal breeding, transport and slaughter, companion animals, laboratory animals, animals used in competition and wildlife.

### Subject areas:

- An introduction to veterinary ethics; the physiology of pain, distress, fear and anxiety
- The effects of genetics on animal welfare
- Specific welfare issues in companion, farmed, laboratory, wild and competitive animals
- Welfare issues in animal husbandry systems transport and slaughter

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Developing and monitoring of livestock production systems [VPM018]

This course will adopt a farming systems approach to permit the student to place livestock production within the context of the utilisation of resources. This will allow a critical consideration of appropriate husbandry for different animals in diverse environmental and socio-economic conditions.

#### Subject areas:

- An introduction to farming systems
- Details of major livestock production systems
- Developing and monitoring of functioning livestock systems with farmers, including organic farming
- Environmental, welfare and breeding issues in sustainable livestock husbandry

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Economics for livestock development and policy [LVM019]

The objectives of this course are to stimulate awareness of the socio-economic, political and environmental issues that will affect future livestock development and to provide the tools to analyse the issues confronting producers, their advisers, planners and policy makers.

#### Subject areas:

- Basic concepts of the economics of livestock production
- Extensive, medium intensity and intensive systems of livestock production
- Marketing and policy
- Further economics for the analysis of livestock development
- Tools for livestock economists

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Epidemiology and animal health economics [LVM004]

This course will enable students to understand the role of epidemiology and economics in the design and delivery of effective veterinary services aimed at improved animal health and productivity.

### Subject areas:

- Introduction to statistics
- Introduction to veterinary epidemiology basic principles, descriptive epidemiology, study design, sampling, quantitative aspects of diagnostic testing
- Animal health economics principles, partial budgets, decision tree analysis, cost benefit ratio, economics and project planning

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Management of infectious disease outbreaks in animal populations [LVM017]

This course will provide both the theoretical and practical information required for the management of a major infectious disease outbreak of farm animals.

#### Subject areas:

- Epidemiology of infectious viral diseases
- Risk and cost-benefit analysis
- Surveillance
- Diagnosis and vaccination strategies before and during an outbreak
- Contingency planning and case studies are used to illustrate how disease outbreaks could be better managed

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Principles of livestock production [LHM002]

This course will enable the student to understand how feeding, breeding, management and interaction with the environment influence animal production and disease.

### Subject areas:

- General principles of nutrition
- Specialised areas of nutrition. Students will select 3 of the following options:
  - Feeding dairy cows
  - o Feeding dual purpose, beef and draught cattle
  - Feeding sheep and goats
  - o Pig nutrition
  - Poultry nutrition
- Nutrition of horses, camelids & rabbits

In all the above cases, consideration will be given to the different resources available in temperate and tropical/subtropical regions.

Environmental studies, including climatic effects and housing

- Genetics
- The physiology of growth and lactation; the relevance of reproduction on livestock production

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Research design and methods [LVM014]

Formerly Research design, management and grant application writing

The module is currently undergoing a substantial revision, the title and study materials (available on the VLE) have changed.

This course will enable students to undertake a Research project.

Further information can be found on the module webpage.

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Research project (MSc degree only) [LVM200]

You are strongly advised to study Research design and methods [LVM014] before taking the Research Project [LVM200]. The Research project [LVM200] is only available to MSc students and not as a 240 hour Individual module.

The objective of this course is to enable the students to conduct a Research project and prepare a scientific paper for publication in a peer-reviewed journal. Students are given guidance and supervision from a distance in the following:

- Deriving a suitable hypothesis to base the Research project
- Writing a critical literature review
- Designing the appropriate study with experimental and statistical details
- Costing the project and conducting experiments
- Managing the project to obtain relevant data
- Documenting and analysis of results to achieve a conclusion
- Selecting an appropriate scientific journal to publish the findings
- Preparing a paper for publication according to author guidelines of the selected journal.

Assessment: A paper suitable for publication in an identified scientific journal (80%) and an oral examination (20%).

### Statistical methods in veterinary epidemiology [VPM012]

The objectives of this course are to introduce statistical methods used in veterinary epidemiology to enable students to conduct multivariable analysis and statistical modelling of epidemiological data.

#### Subject areas:

- Introduction to measures of effect
- Analysis of cohort studies and case-control studies

- Likelihood, Multivariable analysis and statistical modelling
- Simple logistic model, Logistic regression, Poisson regression and Cox regression

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Surveillance and investigation of animal health [VPM015]

This course will provide in-depth knowledge of qualitative and quantitative risk analysis, animal health surveillance programmes and introduce students to disease modelling.

### Subject areas:

- Qualitative and quantitative risk analysis
- Design and evaluation of animal health surveillance and control programmes involving multiple herds
- Disease control methods involving multiple herds
- Farm-level animal disease and production surveillance
- Disease modelling using Deterministic and Stochastic modelling

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

# Veterinary public health [LVM006]

The course will examine the role of veterinarians and other related professionals in the protection of human health through the safe production of foods of animal origin, control of zoonotic disease and environmental contamination.

#### Subject areas:

- Disease surveillance recording and risk analysis
- · Zoonoses and their control
- · Disseminating information on veterinary public health
- Quality and safety assurance in food production (meat, milk and eggs)
- Development of disease control programmes

Assessment: one three-hour unseen written paper containing essay and/or short answer questions (80%) and a TMA (20%).

## 50-hour Individual modules

#### Advanced risk analysis using @RISK software [LVM501]

Risk analysis is being used increasingly in animal health, particularly in relation to trade. It therefore has become essential for people working in animal health policy to have a basic understanding of the terminology and methods used in risk assessment. This course aims to give you that basic understanding, with particular emphasis on qualitative and quantitative risk assessment. The final part of the course explores quantitative risk analysis and demonstrates how you can use the

frameworks and probability theory to build a simple quantitative model. To do this you will be working with a software package called @RISK.

Assessment: one TMA

### Animal disease surveillance [LVM503]

Animal disease surveillance is one of the key functions of animal health services. It has become more important in the last twenty years with the increasing concern for food safety and the emergence of new and exotic diseases, along with the traditional role of measuring disease and monitoring the control of endemic diseases. The evaluation of surveillance is another integral part of any system and must be considered at design stage. This course will introduce you to the principles of disease control, the components of such programmes and their implementation and evaluation, focused on infectious diseases. The detailed description of the traditional disease control strategies will provide you with a deep understanding of the complexity of the decision-making process and how epidemiological tools can help in the control and eradication of animal diseases at regional and national level.

Assessment: one TMA

# Control of food safety: red meat, poultry, eggs, milk and milk products [LVM509]

This course is concerned primarily with microbiological aspects of food safety in the production of red and poultry meat, eggs, milk and milk products. Methods to reduce microbiological contamination in meat during the entire production chain, from farm to slaughterhouse to the retail outlet, are discussed. The course also enables students to understand the importance of contaminated shell eggs, and products derived from them, as vehicles for human infection, principally that caused by salmonella enterica serovar enteritidis. In the final part of the course infections that may be transmitted to the human population via milk and milk products and methods to reduce such contamination are described.

Assessment: one TMA

# Design and analysis of epidemiological investigations – observational and intervention studies [LVM513]

This course will introduce you to observational and intervention studies that are conducted on populations. The course will demonstrate techniques for measuring association between disease and risk factors from these studies. You will learn about the subtle but important differences between the measures of association and the most suitable application for each measure. The strengths and weaknesses of these studies will be presented and the statistical testing requirements will be discussed.

Assessment: one TMA

# Development of a disease control programme: salmonella in pigs and bovine TB [LVM501]

This course will allow you to analyse two examples of national disease control programmes in veterinary public health, namely the salmonella control programme in pig herds in Denmark and the tuberculosis control programme of cattle in the UK. Examples from these two programmes will be used extensively to illustrate the important elements of a disease eradication programme. At the end of this course you will be encouraged to develop your own strategies for combating similar chronic farm animal diseases.

Assessment: one TMA

# Herd health management [LVM502]

The management of information that relates to production, animal health, reproduction and financial records is the foundation of food animal production-oriented health programs.

Good information allows managers to make appropriate decisions for the day-to-day operation of their farms, identify shortfalls in performance, and to monitor the effectiveness of interventions. This course will introduce you to herd health programmes and describe the economic principles which should be applied in the design and delivery of these programmes. The programmes that operate in dairy cattle herds, sheep flocks, pig herds and poultry flocks are explored with examples. In the last part of the course the role of computers in herd health management are described in detail, using the CamDairy software package, which is designed to manage dairy farms as an example.

Assessment: one TMA

# Introduction to statistics, hypothesis testing, study design and analysis of data [LVM511]

This course is designed to explain the basic concepts of statistics and provide a basic introduction to statistical analysis in veterinary and animal health fields. You will also learn about the principles of hypothesis testing, concepts of sampling, study design and parametric and nonparametric methods of data analysis. It is assumed that you have not previously attended any statistics courses, so that the whole subject of statistical analysis is new to you.

Assessment: one TMA

# Introduction to veterinary public health, risk analysis and risk assessment [LVM506]

In this course the diverse nature of Veterinary Public Health (VPH) is explored and your perceptions of what constitutes VPH are challenged. This introductory course to VPH will introduce you to the concept that food can constitute a hazard to human health, and will show you how to measure the risk to consumer health. It is aimed to give a basic understanding of risk analysis, with particular emphasis on qualitative and quantitative risk assessment.

Assessment: one TMA

## Principles, methodology and sampling in epidemiological investigations [LVM512]

This course is intended to provide you with an overview of the scope of modern epidemiology and to introduce the basic concepts of epidemiological investigations. The course will introduce methods for describing the frequency of disease occurrence in animal populations, including risks and rates. During the course you will examine the technique of making inferences about large populations on the basis of examination of a sample. You will learn about the techniques required for the effective sampling of populations and examine the statistical assumptions that underpin sampling theory. The course emphasises the practical use of sampling theory to answer epidemiological questions, giving examples of how sampling techniques may be used effectively in epidemiological investigations.

Assessment: one TMA

#### Principles of food safety control and 'farm to fork' concept [LVM508]

This course will introduce the concept that foods can be hazardous and examines how to control food safety hazards throughout the chain of production, storage and distribution. Suitable control measures to avoid food poisoning bacteria and viruses that may contaminate ready-to-eat food are also identified. In the second part of the course an overview of the controversial subject of the veterinary use of antibiotics, the associated problem of antibiotic resistance, and the implications for

public health is discussed. The course will provide you with the necessary tools to make an objective judgement of this topic.

Assessment: one TMA

# Tools for economic analysis in epidemiology [LVM515]

This course will introduce the principles of economic analysis and a number of tools used to aid decision-making in the field of animal health economics. This is a very practical module, throughout which you will learn how to use the tools in a number of activities and case studies at the same time as gaining an appreciation of the issues involved so as to be able to critically review the work of others. It is assumed that you have not previously studied animal health economics, so that the whole subject is new to you.

Assessment: one TMA

# Zoonoses of parasitic, bacterial and viral origin [LVM507]

This course will provide an overview of some major zoonotic diseases, their epidemiology and their control. It considers some emerging and re-emerging zoonoses that are of importance to human health. The course is subdivided to allow separate coverage of parasites, bacteria, and finally viruses, rickettsia and prions.

Assessment: one TMA

## 35-hour Individual modules

# Animal disease modelling [LVM334]

Simulation models have become an important component of decision making in relation to control of infectious diseases, as had been demonstrated during recent epidemics of FMD and SARS. Models provide the facility to examine 'what if' questions regarding contemplated management choices in the context of current disease control and herd production performance. They also provide a mechanism for generating hypotheses about the important components of an epidemiological system. The course represents an introduction to the concepts of deterministic and stochastic disease modelling.

Assessment: TMA

# Animal health analysis and database management on farms (formerly known as Database management at farms) [LVM333]

In this course you will learn what is meant by database management and how computer software can be used to interrogate and handle databases to gain meaningful information from them, including summary statistics and graphs. You will become acquainted with some of the technical language used to describe databases, and you will gain an understanding of the important points to consider in designing them.

Assessment: TMA

# Animal transport and slaughter – critical welfare considerations [LVM305]

In this course you will learn about the animal welfare issues involved in the handling, transport, and slaughter of livestock. You will learn about the behavioral principles of animal handling, animal welfare issues that arise during transport and the importance of well-designed and managed preslaughter handling systems. At the end of the course you will be able to provide advice on the

design and management of facilities for loading and unloading animals, lairages, races, stockyards, and restraint equipment to prevent transport-related animal welfare problems. Implementation of auditing systems to maintain high levels of welfare during transport, handling and slaughter is an essential component of the knowledge gained.

Assessment: short answer paper

# Diagnostic decision making and epidemiological disease information management [LVM323]

This course will introduce you to diagnostic decision-making, a process which most clinicians deal with by combining factual knowledge, experience and intuition. The application of epidemiology to the improvement of livestock health and production requires responsible management of disease information. From collecting data on milk production from a single dairy farm to using country-wide disease data to determine national livestock import policies, careful and appropriate data management is essential. This course will introduce you to the types of data you might encounter, methods of collecting and storing those data, and some of the many epidemiological tools available to extract as much information as possible for production and disease management decisions.

Assessment: short answer paper

# Principles of farm animal economic analysis [LVM319]

This course on farm animal health economics will provide you with an introduction to the role that economics plays in decision making in the field of animal health. You will start by looking at the sorts of issues that might be involved, and the different perspectives from which issues can be considered. You will then go on to learn about important concepts used in animal health economics before preparing for the practical work in the course by reading about the tools used by animal health economists. The final part is a very practical session which will take you through the steps involved in calculating the output of livestock enterprises.

Assessment: short answer paper

### Tools for economic analysis [LVM320]

This course concentrates on the methodologies used for decision making in the field of animal health and production. The emphasis will be to explain the basic principles involved and will enable you to familiarise yourself with the techniques of partial and benefit-cost analysis through a series of exercises. The course will also provide you with knowledge to critically assess work done by others. Finally the course will present some of the economic tools that can be used to analyse the risk and uncertainty associated with livestock production.

Assessment: short answer paper

### Welfare issues in extensive farming systems [LVM304]

The welfare of extensively farmed animals is influenced by a number of characteristic factors, such as climate, food availability, handling, parasites, predators, etc. Uniquely, these factors interact in a complex way to ensure there are no simple answers to questions of animal welfare. The six sections in this course will help you to understand the complex interplay between the different factors and will provide insights into interpreting the dilemmas they bring.

Assessment: short answer paper

# Welfare issues in systems involving confinement [LVM303]

Intensive farming systems have reduced production costs and maximised outputs but have led to many animal welfare issues. Confinement of animals to smaller spaces leads to many psychological, behavioural and physical problems. Today these issues are debated and scientists and agricultural engineers have worked together to produce enclosures and environments which better meet the needs of animals. This course will explore these issues in detail and you will gain a better understanding of the economic and political ramifications that may be involved in improving husbandry systems.

Assessment: short answer paper

# **Appendix C – RVC Common Grading Scheme – Essay questions**

The assessment criteria for the MSc Research project Oral examination are given in Appendix E.

The assessment criteria for the 35-hour Individual modules are given in Appendix F.

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN MSc/ CertAVP Grade
No answer	Selection and coverage of material	Selection and coverage of material	0	Fail	Fail
	Nothing presented or completely incorrect information or containing nothing at all of relevance.  And/or	Nothing presented or completely incorrect information or containing nothing at all of relevance and/or patient/client/colleague in danger.			
	Understanding of concepts and critical ability	And/or			
	None evident. No evidence of wider reading of an appropriate nature.	Understanding of concepts and critical ability			
	And/or	None evident.			
	Structure, clarity and presentation	And/or			
	None or extremely poor.	Structure, clarity and presentation  None or extremely poor.			

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
Extremely poor answer	Selection and coverage of material	Selection and coverage of material	15	Fail	Fail
poor amono	Hardly any information or information that is almost entirely incorrect or irrelevant.	Hardly any information provided or information that is almost entirely incorrect or irrelevant			
	And/or	and/or patient/client/colleague safety or welfare seriously at risk.			
	Understanding of concepts and critical ability	And/or			
	No or almost no understanding evident. No, or almost no, evidence of wider reading of an appropriate nature.	Understanding of concepts and critical ability			
	And/or	No or almost no understanding evident.  Virtually no interpretation of clinical information			
	Structure, clarity and presentation	or explanation of clinical or professional approach			
	None or very poor.	And/or			
		Structure, clarity and presentation			
		None or very poor.			
Very poor answer	Selection and coverage of material	Selection and coverage of material	27	Fail	Fail
	Very limited amount of information that is correct and relevant.	Very limited amount of information provided that is correct and relevant and/or			
	And/or				

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
	Understanding of concepts and critical ability  If any, extremely limited evidence of understanding. No, or almost no, evidence of wider reading of an appropriate nature.  And/or  Structure, clarity and presentation  Very poor.	patient/client/colleague safety or welfare seriously at risk.  And/or  Understanding of concepts and critical ability  If any, extremely limited evidence of understanding. For relevant questions, no, or almost no, evidence of wider reading of an appropriate nature. And/or no discernible critical thinking/synthesis of information.  And/or  Structure, clarity and presentation			
Poor answer	Selection and coverage of material	Very poor.  Selection and coverage of material	35	Fail	Fail
	Little information that is correct and relevant.  And/or  Understanding of concepts and critical ability	Incomplete or inaccurate description of clinical/professional reasoning and/or inadequate description of diagnostic/therapeutic approach, with a large number of errors and/or			

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
	If any, very limited evidence of understanding. There may be evidence of very limited wider reading of an appropriate nature.  And/or  Structure, clarity and presentation  Poor.	patient/client/colleague safety or welfare likely to be compromised.  And/or  Understanding of concepts and critical ability  If any, very limited evidence of understanding. Very little evidence of critical thinking, analysis and synthesis of information. Where relevant, there may be evidence of very limited wider reading of an appropriate nature.  And/or  Structure, clarity and presentation  Poor.			
Clearly deficient answer	As for 45 but with a greater number, and/or more significant, omissions/inaccuracies/errors, flaws in understanding, presentation and/or communication of information. There may be less evidence of wider reading of an appropriate nature.	As for 45 but with a greater number, and/or more significant, omissions/inaccuracies/errors, flaws in understanding, presentation and/or communication of information and/or patient, client or colleague safety concerns. There may be less evidence of wider reading of an appropriate nature.	42	Third	Fail

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
Deficient answer	Selection and coverage of material  Superficial coverage of topic that is descriptive and flawed by many important omissions and/or significant errors.  And/or  Understanding of concepts and critical ability  Some evidence of understanding but not of original thought or critical analysis. Where relevant, evidence of limited wider reading of an appropriate nature.  And/or  Structure, clarity and presentation  Some disorganisation in structure, lack of organisation, and/or deficiencies in clarity of expression.	Selection and coverage of material Incomplete description of clinical and/or professional reasoning, lacking explanation and justification for the approach taken. And/or deficient description and justification of diagnostic and therapeutic approach, with significant errors or omissions. And/or patient/client/colleague safety or welfare potentially compromised.  And/or  Understanding of concepts and critical ability  Likely to be inaccuracies in analysis and/or interpretation of clinical/professional information and unexplained observations or assertions. And/or little or no evidence of critical thinking, analysis and synthesis of information.  And/or  Structure, clarity and presentation	45	Third	Fail

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
		Some disorganisation in structure, lack of organisation, and/or deficiencies in clarity of expression.			
Marginally deficient answer	As for 45 but with fewer, and/or less significant, omissions/inaccuracies/errors, flaws in understanding, presentation and/or communication of information. There may be more evidence of wider reading of an appropriate nature.	As for 45 but with fewer, and/or less significant, omissions/inaccuracies/errors, flaws in understanding, presentation and/or communication of information and/or patient, client or colleague safety concerns. There may be more evidence of wider reading of an appropriate nature.	48	Third	Fail
Adequate answer	As for 55 but with more numerous, and/or more significant omissions/inaccuracies/errors, flaws in understanding, presentation and/or communication of information. If relevant, there may be less evidence of wider reading of an appropriate nature.	As for 55 but with more numerous, and/or more significant omissions/inaccuracies/errors, flaws in understanding, presentation and/or communication of information and/or patient, client or colleague safety concerns. If relevant, there may be less evidence of wider reading of an appropriate nature.	52	2:ii	Pass
Sound answer	Selection and coverage of material	Selection and coverage of material	55	2:ii	Pass
	Basic coverage of main aspects of topic but with some significant omissions/inaccuracies/errors.  Understanding of concepts and critical ability	Adequate description of clinical and/or professional reasoning, with some justification for the diagnostic or therapeutic approach taken. Diagnostic and therapeutic approach is			

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
	Statements supported by facts but limited evidence of critical ability or powers of argument. If relevant, evidence of sufficient wider reading of an appropriate nature.  Structure, clarity and presentation	appropriate and logical, with no gross errors or omissions. Some speculation is evident, but likely to be unsubstantiated. Patient/client/colleague safety and welfare not compromised.  Understanding of concepts and critical			
	In general, organised and logical presentation with adequate clarity of expression.	ability  Basic grasp of concepts, with most assertions and observations supported and some evidence of critical analysis and synthesis of information. Responses are generally logical, but there may be some unexplained observations or assertions. Where relevant, evidence of sufficient wider reading of an appropriate nature.  Structure, clarity and presentation  Reasonably well-organised and logically presented with adequate clarity of expression.			
Very sound answer	As for 55 but with fewer, and/or less significant omissions/inaccuracies/errors and more evidence of critical ability and/or powers of argument and	As for 55 but with fewer, and/or less significant omissions/inaccuracies/errors and more evidence of critical ability and/or powers of argument and clarity of expression. If relevant, there may be more evidence of wider reading	58	2:ii	Pass

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
	clarity of expression. There may be more evidence of wider reading of an appropriate nature.	of an appropriate nature. Patient/client/colleague safety and welfare not compromised.			
Quite good answer	As for 65 but with more, and/or more significant, omissions/inaccuracies/errors and less evidence of critical ability. There may be less evidence of wider reading of an appropriate nature.	As for 65 but with more, and/or more significant, omissions/inaccuracies/errors and less evidence of critical ability. If relevant, there may be less evidence of wider reading of an appropriate nature. Patient/client/colleague safety and welfare not compromised.	62	2:i	Pass
Good answer	Selection and coverage of material  Good coverage of relevant material and clear evidence of critical judgement in selection of information. Few or no significant omissions or errors.  Understanding of concepts and critical ability  Thorough grasp of concepts and evidence of synthesis of information and critical ability. If relevant, evidence of sufficient, or some more extensive, wider reading of an appropriate nature.  Structure, clarity and presentation	Selection and coverage of material  Sound description of clinical and/or professional reasoning, with clear justification for the approach taken. Diagnostic and therapeutic approach is appropriate and logical, with only minor errors or omissions that would not impact patient/client/colleague welfare. Some speculation, where appropriate, but may not be fully supported.  Patient/client/colleague safety and welfare is of a high standard.  Understanding of concepts and critical ability	65	2:i	Merit

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
	Logical and organised structure with clarity of expression.	Thorough grasp of concepts with all observations and assertions fully supported. Evidence of critical analysis and synthesis of information. Some evidence of original/innovative thinking. Where relevant, evidence of sufficient, or some more extensive, wider reading of an appropriate nature.			
		Structure, clarity and presentation			
		Logical and well-organised account with good clarity of expression.			
Very good answer	As for 65 but with fewer, and/or less significant, omissions/inaccuracies/errors. More evidence of critical judgement likely. There may be more evidence of wider reading of an appropriate nature.	As for 65 but with fewer, and/or less significant, omissions/inaccuracies/errors. More evidence of critical judgement likely. If relevant, there may be more evidence of wider reading of an appropriate nature. Patient/client/colleague safety and welfare is of a high standard.	68	2:i	Merit
Extremely good answer	Selection and coverage of material	Selection and coverage of material	75	First	Distinction
3000 allowe	Question answered fully and accurately. Few errors and/or omissions and none of significance.  Understanding of concepts and critical ability	Full and accurate description of clinical approach, high standard of clinical and/or professional reasoning, with very few errors and/or omissions and none of significance to			n

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
	Thorough grasp of concepts with evidence of powers of critical analysis, argument and original thinking. If relevant, evidence of extensive wider reading of an appropriate nature.	the patient, client or colleague. Where appropriate, sensible and rational speculation. Patient/client/colleague safety and welfare is of a very high standard.			
	Structure, clarity and presentation  Logical and organised structure with clarity of	Understanding of concepts and critical ability			
	expression.	Thorough grasp of concepts. Clear evidence of critical analysis, synthesis of information and original/innovative thinking throughout. Where relevant, references to authoritative sources used extensively and appropriately.			
		Structure, clarity and presentation			
		Very well-organised with very good clarity of expression.			
Excellent answer	As for 75 but demonstrating an authoritative grasp of concepts with sustained powers of argument, and frequent insights. Virtually no errors or omissions and none of significance.	As for 75 but demonstrating an authoritative grasp of concepts with sustained powers of argument, and frequent insights. Virtually no errors or omissions and none of significance. Patient/client/colleague safety and welfare is of a very high standard.	82	First	Distinctio n

Mark descriptor	Long Answer Questions	Clinical and/or Professional Reasoning Questions (some or all descriptors may apply)	Mark (%)	BSc class	BVM/VN/ MSc/ CertAVP Grade
Outstanding answer	As for 82 but with strong evidence of independent thinking throughout and no omissions or factual errors.	As for 82 but with strong evidence of independent thinking throughout and no omissions or factual errors. Patient/client/colleague safety and welfare is of a very high standard.	90	First	Distinctio n
Exceptional answer	Selection and coverage of material  Exceptional depth of coverage with no identifiable errors or omissions.  Understanding of concepts and critical ability  Exceptional powers of analysis, argument, synthesis and insight. Considerable evidence of extensive wider reading of an appropriate nature.  Structure, clarity and presentation  Flawless.	Selection and coverage of material  Exceptional depth of coverage of clinical and/or professional reasoning with no identifiable errors or omissions. Patient safety, welfare and management is of an exceptional standard.  Understanding of concepts and critical ability  Exceptional powers of analysis, argument, synthesis and insight. Where relevant, considerable evidence of extensive wider reading of an appropriate nature.  Structure, clarity and presentation	100	First	Distinctio n

#### **Appendix D – RVC Common Grading Scheme – Research project reports**

MSc only				
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc/ CertAVP Grade
No answer	Selection and coverage of material	0	Fail	Fail
	Nothing presented and/or completely incorrect information and/or containing nothing at all of relevance.			
	And/or			
	Understanding			
	None evident.			
	And/or			
	Structure, clarity and presentation			
	None or extremely poor.			
Extremely poor answer	Selection and coverage of material	15	Fail	Fail
answei	Hardly any information or information that is almost entirely incorrect and/or irrelevant.			
	And/or			
	Understanding			
	No or almost no understanding evident.			
	And/or			

MSc only				
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc/ CertAVP Grade
	Structure, clarity and presentation			
	None or very poor.			
Very poor answer	Selection and coverage of material	27	Fail	Fail
unower	Very limited amount of information that is correct and relevant.			
	And/or			
	Understanding			
	If any, extremely limited evidence of understanding.			
	And/or			
	Structure, clarity and presentation			
	Very poor.			
Poor answer	Selection and coverage of material	35	Fail	Fail
	Incomplete and/or inaccurate account of task with inadequate description of aims and methods of practical work and containing significant, and/or a large number of, errors.			
	And/or			
	Understanding			

MSc only				
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc CertAVP Grade
	If any, very limited evidence of understanding with many unexplained observations and/or assertions likely. Little or no evidence of original/innovative thinking. Very limited reference to published work from authoritative sources.			
	And/or			
	Structure, clarity and presentation			
	Poor.			
Clearly deficient answer	As for 45 but with a greater number, and/or more significant, omissions/inaccuracies/errors, flaws in understanding, interpretation, presentation and/or communication of information.	42	Third	Fail
Deficient	Selection and coverage of material	45	Third	Fail
answer	Superficial coverage with incomplete record of aims and methods of practical work and flawed by errors &/or omissions. Little comment on most observations.			
	And/or			
	Understanding			
	Likely to be inaccuracies in data analysis and/or interpretation and unexplained observations or assertions. Little or no evidence of original/innovative thought. Very limited reference to published work from authoritative sources.			
	And/or			
	Structure, clarity and presentation			

MSc only				
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc/ CertAVP Grade
	Adequate, although may not be entirely systematic			
Marginally deficient answer	As for 45 but with fewer, and/or less significant, omissions/inaccuracies/errors, flaws in understanding, interpretation, presentation and/or communication of information.	48	Third	Fail
Adequate answer	As for 55 but with more numerous, and/or more significant, omissions/inaccuracies/errors, flaws in understanding, interpretation, presentation and/or communication of information.	52	2:ii	Pass
Sound answer	Selection and coverage of material	55	2:ii	Pass
	Systematic account of task with adequate record of aims and methods of practical work and no significant errors, omissions or inaccuracies. Appropriate speculation, if present, is likely to be unsubstantiated.			
	Understanding			
	Limited evidence of original/innovative thought. Sufficient reference to published work from authoritative sources. Data are largely accurate but there may be some unexplained observations or assertions.			
	Structure, clarity and presentation			
	Reasonably well-organised and logically presented with adequate clarity of expression.			
Very sound answer	As for 55 but with fewer, and/or less significant, omissions/inaccuracies/errors and more evidence of critical ability and/or powers of argument and clarity of expression.	58	2:ii	Pass

MSc only				
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc/ CertAVP Grade
Quite good answer	As for 65 but with less evidence of critical judgement and more, or more important, omissions/inaccuracies/errors. There is likely to be less evidence of wider reading through reference to published work from authoritative sources.	62	2:i	Pass
Good answer	Selection and coverage of material	65	2:i	Merit
	Systematic and accurate account of task with full record of aims and methods of practical work and no significant errors or omissions. Some speculation, where appropriate, but may not be fully supported.			
	Understanding			
	Thorough grasp of concepts with reasonable comment on all observations with few unexplained findings or assertions. Some evidence of original/innovative thinking. Appropriate reference to published work from authoritative sources. Data manipulated and analysed correctly.			
	Structure, clarity and presentation			
	Logical and well-organised account with clarity of expression.			
Very good answer	As for 65 but with more evidence of critical judgement and fewer and/or less significant omissions/inaccuracies/errors. There is likely to be more evidence of wider reading through reference to published work from authoritative sources.	68	2:i	Merit

MSc only							
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc/ CertAVP Grade			
Extremely good answer	Selection and coverage of material	75	First	Distinction			
good unower	Full and accurate account of task, aims and methods of practical work with few errors and/or omissions and none of significance. Where appropriate, sensible speculation, supported by evidence.						
	Understanding						
	Thorough grasp of concepts with some critical and/or comparative comment on all observations. Clear evidence of original/innovative thinking. Published work from authoritative sources used extensively and appropriately. Data manipulated and analysed correctly.						
	Structure, clarity and presentation						
	Very well-organised.						
Excellent answer	As for 75 but demonstrating an authoritative grasp of concepts with sustained powers of argument, frequent insights and much evidence of original/innovative thinking. Virtually no errors or omissions and none of significance.	82	First	Distinction			
Outstanding answer	As for 82 but with strong evidence of original/innovative thinking throughout and no omissions or factual errors. Would be of publishable standard with only minor modifications to content.	90	First	Distinction			

MSc only								
Mark descriptor	Research Project Reports	Mark (%)	BSc class	BVM/VN/MSc/ CertAVP Grade				
Exceptional answer	Selection and coverage of material	100	First	Distinction				
anowor	Exceptional depth of coverage with no identifiable errors or omissions.							
	Understanding							
	Exceptional powers of analysis, argument, synthesis and insight.							
	Structure, clarity and presentation							
	Flawless. Of publishable standard with only amendments in style/formatting required.							

#### **Appendix E – Assessment Criteria – MSc Research Project Oral examination**

The assessment criteria for the 240-hour and 50-hour Individual modules are given in Appendix C.

The assessment criteria for the 35-hour Individual modules are given in Appendix F.

The MSc Oral Project will be marked according to the following scheme:

Evidence of / understanding of:	0	1	2	3	4	5	6	7	8	9	10
(i) Research question (aims & objectives)	None	Very little	Little	Some but limited and superficial; gaps in knowledge evident	Some but generally superficial; gaps in knowledge may be evident	Generally adequate	Gener ally quite good	Mostly good; sometimes very good	Consist ently very good	Consistently very good with examples of excellence	Consistently excellent
(ii) Wider context of work	None	Very little	Little	Some but limited and superficial; gaps in knowledge evident	Some but generally superficial; gaps in knowledge may be evident	Generally adequate	Gener ally quite good	Mostly good; sometimes very good	Consist ently very good	Consistently very good with examples of excellence	Consistently excellent
(iii) Methodology used	None	Very little	Little	Some but limited and superficial; gaps in knowledge evident	Some but generally superficial; gaps in knowledge	Generally adequate	Gener ally quite good	Mostly good; sometimes very good	Consist ently very good	Consistently very good with examples of excellence	Consistently excellent

Evidence of / understanding of:	0	1	2	3	4	5	6	7	8	9	10
					may be evident						
(iv) Data and data analysis	None	Very little	Little	Some but limited and superficial; gaps in knowledge evident	Some but generally superficial; gaps in knowledge may be evident	Generally adequate	Gener ally quite good	Mostly good; sometimes very good	Consist ently very good	Consistently very good with examples of excellence	Consistently excellent
(v) Conclusions including context & literature cited	None	Very little	Little	Some but limited and superficial; gaps in knowledge evident	Some but generally superficial; gaps in knowledge may be evident	Generally adequate	Gener ally quite good	Mostly good; sometimes very good	Consist ently very good	Consistently very good with examples of excellence	Consistently excellent
Overall quality of answers (depth, breadth & clarity)	Irrelev ant or incomp rehens ible	Extremel y poor	Generally very poor	Generally poor	Mixture of adequate and poor	Generally adequate	Gener ally quite good	Generally good; sometimes very good	Consist ently very good	Consistently very good or excellent	Consistently excellent

#### Interpretation of Marking Scheme for the oral examination for MSc Project

At the end of the oral, the examiners agree the appropriate wording for each of the five categories and then calculate the total as follows:

Criteria	Final Mark Calculation					
5 categories given the same mark	That mark will be awarded					
4 of 5 categories given the same mark and 1 category given a mark above or below, but not 0	The mark given for the 4 categories will be awarded					
2 or 3 categories given the same mark	Calculate the average mark (round up if X.45 and above; round down if X.44 and below)					
No category given the same mark	The median mark will be awarded					
Note: A mark of zero in any category should result in the overall mark awarded being decreased by one.						

#### Appendix F – Assessment Criteria – Short answer questions and problem solving

The assessment criteria for the 240-hour and 50-hour Individual modules are given in Appendix C.

The assessment criteria for the oral examination for the MSc Project are given in Appendix D.

The 35-hour Individual modules will be marked out of 10 according to the following scheme:

Mark out of 10 (Tutor- marked assignment)	Descriptor	Factual information and integration of knowledge	Understanding of concepts and critical ability	Presentation
10	Perfect	Factually flawless; excellent integration of knowledge	Full understanding; excellent critical ability	Excellent style and expression
9	Almost perfect	Factually, almost flawless; good integration of knowledge	Full understanding; good critical ability	Excellent style and presentation
8	Excellent: Distinction standard	Relevant factually information well covered and weighted appropriately; good integration of knowledge	Good understanding; good critical ability	Style and expression very good
7	Very Good: Merit Standard	Relevant factually information well covered; some integration of knowledge	Good understanding, good critical ability	Style and expression good

Mark out of 10 (Tutor- marked assignment)	Descriptor	Factual information and integration of knowledge	Understanding of concepts and critical ability	Presentation
6	Convincing pass	Sufficient relevant factual information but lacking in depth; little or no integration of knowledge	Some understanding; moderate critical ability	Style and expression generally good
5	Minimum Adequate	Barely sufficient relevant factual information; no integration of knowledge	Some understanding; some critical ability	Style and expression adequate
4	Definite, but not bad failure	Some relevant factual information but lacking in breadth and/or depth; no integration of knowledge	Some limited understanding; no critical ability	Style and expression poor
3	Bad failure	Considerable defects in relevant factual information; no integration of knowledge	Considerable defects in understanding but not totally lacking; no critical ability	Style and expression very poor
2	Very bad failure	Only a few correct pieces of relevant factual information	Very little (or no) understanding; no critical ability	Style and expression terrible
1	Almost no competent response	At most, one or two pieces of relevant factual information	None	Not relevant

Mark out of 10 (Tutor- marked assignment)	Descriptor	Factual information and integration of knowledge	Understanding of concepts and critical ability	Presentation
0	Not submitted/no answer	No relevant factual information	None	Not relevant