

# VM4401: RESEARCH PROJECT

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## Effective Term

Semester A 2023/24

## Part I Course Overview

### Course Title

Research Project

### Subject Code

VM - Jockey Club College of Veterinary Medicine and Life Sciences

### Course Number

4401

### Academic Unit

Veterinary Clinical Sciences (VCS)

### College/School

Jockey Club College of Veterinary Medicine and Life Sciences (VM)

### Course Duration

Two Semesters

### Credit Units

0-6

### Level

B1, B2, B3, B4 - Bachelor's Degree

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Completion of Year 4 courses with C grade or above

### Precursors

Nil

### Equivalent Courses

Nil

### Exclusive Courses

Nil

## Part II Course Details

### Abstract

The study of veterinary science requires an understanding of the basic principles of academic research and this course will provide an opportunity to conduct real-life research on a topic of interest to the student.

In this course the student will systematically investigate a topic to test a hypothesis under the guidance of a research advisor and peers under independent review. The project will culminate in preparation of a manuscript in the style of an appropriate scientific journal. Narrative literature reviews are not acceptable.

### Course Intended Learning Outcomes (CILOs)

CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1 Develop a hypothesis and objectives for an original body of research. Propose the methodology to be used to investigate the research hypothesis, considering ethical frameworks, appropriate sample sizes and statistical analyses.		x		x
2 Understand, observe and comply with institutional guidelines and frameworks for ethical research.		x	x	
3 Collect, organise and analyse complex information in relation to specific problems, assessing its validity and reaching probabilistic judgements			x	x
4 Use your research findings to formulate a draft manuscript, and develop, modify and refine it through the peer review process.				x
5 Workshop scientific problems with peers and supervisors and communicate research questions, findings and conclusions to specialist and non-specialist audiences		x	x	x

#### A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

#### A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

#### A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

### Teaching and Learning Activities (TLAs)

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1 Lectures	Overview of the conduct of scientific research, planning, and presentation	1, 2, 3, 4, 5	12 hours total - 8 hours in Semester A, 4 hours in early Semester B
2 Presentations	Oral presentations of research proposals	1, 2, 5	15 min per student

3	Presentations	Oral presentations of research findings	2, 5	15 min per student
4	Research	Research – dry or wet lab or field	2, 3, 4, 5	3 hrs/wk for 10 weeks in Semester A
5	Research	Research – dry or wet lab or field	2, 3, 4, 5	5 hrs/wk for 6 weeks in Semester B

**Assessment Tasks / Activities (ATs)**

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Research proposal	1, 2, 3, 4, 5	10	
2	Literature review	1, 3, 4, 5	25	
3	Oral presentation of proposal	1, 2, 3, 4, 5	10	
4	Manuscript	1, 2, 3, 4, 5	40	
5	Final presentation	1, 2, 3, 4, 5	15	

**Continuous Assessment (%)**

100

**Examination (%)**

0

**Additional Information for ATs**

Notes regarding continuous assessment:

A penalty of 5% of the total marks for the assessment task will be deducted per working day for late submissions, and no marks will be awarded for submissions more than 10 working days late.

**Assessment Rubrics (AR)****Assessment Task**

Research Proposal (incl. Methodology and Budget)

**Criterion**

Ability to formulate a competent research proposal with logical hypothesis and objectives

**Excellent (A+, A, A-)**

Extremely competent research proposal

**Good (B+, B, B-)**

Highly competent research proposal

**Fair (C+, C, C-)**

Competent research proposal

**Failure (F)**

Research proposal that lacks in competency

**Assessment Task**

Literature Review

**Criterion**

Students display their ability to research the background of the study appropriately

**Excellent (A+, A, A-)**

Extremely competent use of the scientific literature to guide and shape the proposed research

**Good (B+, B, B-)**

Highly competent use of the scientific literature to guide and shape the proposed research

**Fair (C+, C, C-)**

Competent use of the scientific literature to guide and shape the proposed research

**Failure (F)**

Use of the scientific literature lacking in competence to guide and shape the proposed research

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**Assessment Task**

Oral presentation of proposal

**Criterion**

Ability to communicate a research problem in the context of background knowledge to peers and public

**Excellent (A+, A, A-)**

Extremely well conducted public presentation of a research problem in the context of background knowledge to peers and public

**Good (B+, B, B-)**

Well conducted public presentation of a research problem in the context of background knowledge to peers and public

**Fair (C+, C, C-)**

Competently conducted public presentation of a research problem in the context of background knowledge to peers and public

**Failure (F)**

Public presentation of a research problem in the context of background knowledge to peers and public conducted with lacking competency

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**Assessment Task**

Manuscript

**Criterion**

Ability to present research findings to scientific community

**Excellent (A+, A, A-)**

Extremely well presented scientific manuscript

**Good (B+, B, B-)**

Well presented scientific manuscript

**Fair (C+, C, C-)**

Competently presented scientific manuscript

**Failure (F)**

Scientific manuscript presented lacking basic competency

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**Assessment Task**

Final presentation

**Criterion**

Ability to present research findings to peers and public

**Excellent (A+, A, A-)**

Extremely well conducted public presentation of research project

**Good (B+, B, B-)**

Well conducted public presentation of research project

**Fair (C+, C, C-)**

Competently conducted public presentation of research project

**Failure (F)**

Public presentation of research project conducted with lacking competency

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**Additional Information for AR**

Mark Range

The following is the mark range for each letter grade that must be used for assessment of any examinations or coursework of BVM courses (VM- and GE-coded) offered by PH and VCS:

A+: ≥85% A: 80-84.99% A-: 75-79.99% B+: 70-74.99% B: 65-69.99% B-: 60-64.99% C+: 55-59.99% C: 50-54.99% F: <50%

**Part III Other Information****Keyword Syllabus**

Clinical research, research skills, conduct, competency, publication, presentation

**Reading List****Compulsory Readings**

Title	
1	Mark Holmes & Peter Cockcroft (2008). Handbook of Veterinary Clinical Research. Blackwell Publishing.
2	Mark Holmes & Peter Cockcroft (2003). The Handbook of Evidence-Based Veterinary Medicine. Blackwell Publishing.
3	Dirk Pfeiffer (2010). Veterinary Epidemiology: An Introduction. Wiley-Blackwell.
4	Richard B. Evans & Annette O' Connor "Statistics and Evidence-Based Veterinary Medicine: Answers to 21 Common Statistical Questions That Arise from Reading Scientific Manuscripts, Vet Clin Small Anim 37 (2007) 477-486, doi:10.1016/j.cvsm.2007.01.006

**Additional Readings**

Title	
1	<a href="http://knowledge.rcvs.org.uk/evidence-based-veterinary-medicine/ebvm-toolkit/">http://knowledge.rcvs.org.uk/evidence-based-veterinary-medicine/ebvm-toolkit/</a>
2	<a href="http://www.ebvmllearning.org/acquire/where-to-find-the-evidence/other-sources-of-information/">http://www.ebvmllearning.org/acquire/where-to-find-the-evidence/other-sources-of-information/</a>

3	Veterinary Clinics of North America: Small Animal Practice, Volume 37, Issue 3, Pages 409-616 (May 2007), Evidence-Based Veterinary Medicine, Edited by Peggy L. Schmidt, <a href="http://www.sciencedirect.com/science/journal/01955616/37/3">http://www.sciencedirect.com/science/journal/01955616/37/3</a>
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