



Program: Doctor of Veterinary Medicine
Course title Equine Medicine
Course code VSCL 551

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master
☐ Higher Graduate Diploma ☐ Doctor
Faculty / College / Institute: Faculty of Veterinary Science
Department of Clinical Sciences and Public Health

TQF 3 Course Specification

Section 1 General Information

1. Course Code and Title

In Thai สพวค ๕๕๑ เวชศาสตร์ม้า
In English VSCL 551 Equine Medicine

2. Number of Credits

4 (3-3-7)
(Theory 3 hrs. Practice 3 hrs. Self-Study 7 hrs./week)

3. Curriculum and Course Type

3.1 Curriculum Bachelor Degree Program (Thai)
3.2 Course Type Specific Course ☒ Compulsory Course ☐ Electives

4. Course Coordinator and Lecturer

4.1 Course Responsible Lecturers

Dr. Nuttawut Nuchprayoon	Department of Clinical Sciences and Public Health
Telephone Number 0859085190	Email address: nuttawut.nuc@maidol.edu
Dr. Parichart Tesena	Department of Clinical Sciences and Public Health
Telephone Number 024415242-4 ext. 2223	Email address: parichart.tes@mahidol.ac.th

4.2 Lecturers

1. Assoc. Prof. Dr. Walasinee Sakcamduang (WS)	Department of Clinical Sciences and Public Health
Telephone Number 024415242	Email address: walasinee.sak@mahidol.edu
2. Dr. Siraya Chuenkamrai (SC)	The Horsepital
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3. Dr. Ruangrat Buddhirongawatr (RB)	Department of Clinical Sciences and Public Health
Telephone Number 024415242 ext. 2224	Email address: ruangrut.bud@mahidol.edu
4. Asst. Prof. Maturawan Tunhikorn (MT)	Department of Clinical Sciences and Public Health
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5. Asst. Prof. Dr. Duangthip Chatchaisak (DC)	Department of Clinical Sciences and Public Health
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7. Dr. Ruethaiwan Pokaew (RP)	Department of Clinical Sciences and Public Health
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8. Pusprapa Jandee (PJ)	Department of Clinical Sciences and Public Health
Telephone Number 024415242	Email address: prettyhorse1@gmail.com
9. Dr. Nuttawut Nuchprayoon (NN)	Department of Clinical Sciences and Public Health
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10. Sutdhicha Jaisai (SJ)	Pusin Farm Horse Riding
Telephone Number 0968954156	Email address: sutdhicha@gmail.com
11. Karuna Neraphong (KN)	Karuna Physical Therapy Clinic
Telephone Number 023211715	Email address: Karunaneraphong@yahoo.com

5. Semester/Class Level

5.1 Semester 1 / Class Level 5

5.2 Number of Students Allowed Approximately 80 Students

6. Pre-requisite

VSPA 436, VSCL 440, VSCL 442, VSCL 445

7. Co-requisites

N/A

8. Study Site Location Faculty of Veterinary Science, Mahidol University

9. Date of Preparation/Latest Revision of the Course Specifications

Day 26th Month June Year 2022

Section 2 Aims and Objectives

1. Course Goals

To provide the experience and learning in equine about how to diagnose and resolve the clinical problems, diseases, and complications in horses. To integrate the knowledge for planning the appropriate way in the prevention program, adjust the farm management, and treatment program.

2. Objectives of Course Development/Revision

2.1 Course Objectives

This course aims to provide knowledge and abilities as follows:

2.1.1 Learners understand the approach to diagnosis, treatment, and prevention in the horse's problem

2.1.2 Improve the clinical skills for diagnosis the horse's problems

2.1.3 Encourage the good attitude and experience of basic horsemanship between the horses and learners

2.1.4 Students learn how to communicate and deal with the owner and/or groom when approaching to the case

2.2 Course-level Learning Outcomes: CLOs

On completion of the course, the students will be able to

1. CLO1 Explain the major problems in these body systems: dental and gastrointestinal tract, respiratory, neurology, ophthalmology, integument, cardiovascular, musculoskeletal, endocrine and metabolic, and also include the age-related problems (neonatal, foal, and geriatric), infectious disease, and emergency situation
2. CLO2 Select and/or perform the appropriate way to diagnose the horse's problems
3. CLO3 Explain the step for correcting the horse's problems, adjusting the stable management, caring step and/or rehabilitation program after treatment
4. CLO4 Plan the prevention program, disease surveillance, and quarantine to limit the outspread of infectious disease
5. CLO5 Evaluate the prognosis and complication of the horse's problem

Section 3 Course Description and Implementation

1. Course Description

การจัดการฟาร์มม้า เทคนิคปฏิบัติในการตรวจร่างกายม้า การหาสาเหตุของโรค การวินิจฉัย การรักษาและการป้องกันโรคระบบทางเดินหายใจ หัวใจ หลอดเลือดและท่อน้ำเหลือง ทางเดินอาหาร ภูมิคุ้มกัน กล้ามเนื้อและโครงสร้างร่างกาย ขั้วถ่ายปัสสาวะ ผิวหนัง กระดูก ต่อมน้ำนม โรคตา โรคที่เกิดจากการให้อาหารและการจัดการที่ไม่ถูกต้อง โรคติดเชื้อ ภาวะฉุกเฉินในม้า โรคในลูกม้าและม้าแก่ การรักษาทางเลือก

Equine farm management, physical examination, diagnostic procedures, treatment and prevention on diseases of the respiratory, cardiovascular and lymph vessels, gastrointestinal, immune, musculoskeletal, urinary, integument, nervous, and endocrine systems, ophthalmic diseases, nutritional management, infectious diseases, emergency situation, neonatal and geriatrics diseases, and alternative medicine.

The course description should reflect the course goals, and it is a concept-based description instead of a teaching topic to facilitate the flexibility of adjusting the lesson plan to keep pace with changes.

2. Number of hours per semester

Theory (hours)	Practice (hours)	Self-study (hours)
70	21	105

3. Number of Hours per Week for Individual Advice

Learner can contact a course responsible lecturer to make an appointment with the specific lecturer for 1 hour per week, if need.

Section 4: Development of the expected learning outcomes

1. A brief summary of the knowledge or skills expected to develop in students; the course-level expected learning outcomes (CLOs)

On completion of the course, students will be able to:

1. CLO1 Understand the major problems in these equine body systems: dental and gastrointestinal tract, respiratory, neurology, ophthalmology, integument, cardiovascular, musculoskeletal, endocrine and metabolic, and also include the age-related problems (neonatal, foal, and geriatric), infectious disease, and emergency situation
2. CLO2 Select and/or perform the appropriate way to diagnose the horse's problems
3. CLO3 Explain the step for correcting the horse's problems, adjusting the stable management, caring step and/or rehabilitation program after treatment
4. CLO4 Plan the prevention program, disease surveillance, and quarantine to limit the outspread of infectious disease
5. CLO5 Evaluate the prognosis and complication of the horse's problem

2. How to organize learning experiences to develop the knowledge or skills stated in number 1 and how to measure the learning outcomes

CLOs	Teaching and learning experience management					Learning outcomes measurements			
	Lecture	Demonstrate	Practice	Group discussion		MCQ	Short answer	Group presentation	
CLO1	X	X		X		X	X	X	
CLO2	X	X	X	X		X	X	X	
CLO3	X			X		X	X	X	
CLO4	X			X		X	X	X	
CLO5	X					X	X		

SECTION 5 LESSON PLAN AND EVALUATION

1. Lesson Plan

Teaching Period	Topics/Details	Number of hours		Methods: Teaching Media	Lecturer
		Theory*	Practice**		
1	Introduction to POA in equine medicine and nutrition-related problem	2		Lecture: ppt	SC
		1		Group discussion: POA in equine medicine, case study on nutrition-related problem	
2	Equine endocrine disease and geriatric medicine	2		Lecture: ppt	SC
		1		Group discussion: case study on equine endocrine disease and geriatric medicine	
3	Equestrian	3		Lecture: ppt	NN
4	FEI passport	3		Lecture: ppt	PT
5	Equine dentistry	3		Lecture: ppt	NN
			3	Demonstration and Laboratory practice: dental examination on skulls and a real horse	
6	Equine gastrointestinal tract disorder: Stomach and small intestine	3		Lecture: ppt	PT
			1:30	Demonstration: gastroscopy	
7	Equine gastrointestinal tract disorder: Cecum and large intestine	3		Lecture: ppt	RP
8	Equine respiratory disease	3		Lecture: ppt	PJ
			1:30	Demonstration: respiratory endoscopy	
9	Equine infectious disease and control	6		Lecture: ppt	PT
10	Equine ophthalmology	3		Lecture: ppt	RB

Teaching Period	Topics/Details	Number of hours		Methods: Teaching Media	Lecturer
		Theory*	Practice**		
			3	Demonstration and Laboratory practice: Ophthalmic examination	
11	Equine musculoskeletal disorder and foot problems	6		Lecture: ppt	NN
			1:30	Demonstration and Laboratory practice: lameness examination	
12	Rehabilitation in equine	3		Lecture: ppt	KN
			1:30	Demonstration and Laboratory practice: equine rehabilitation, muscle stretching	
13	Equine acupuncture	3		Lecture: ppt	SJ
			3	Demonstration and Laboratory practice: Qi evaluation, dry needle acupuncture, electrical acupuncture	
14	Equine neonatal disease	6		Lecture: ppt	PT
15	Equine nutrition	3		Lecture: ppt	RP
16	Heart murmurs, irregularities, and cardiac abnormalities	3		Lecture: ppt	WS
			3	Demonstration and Laboratory practice: physical examination on cardiac area, Electrocardiography	
17	Equine neurological disorder	3		Lecture: ppt	DC
			3	Demonstration and Laboratory practice: Neurological examination	
18	Equine dermatology	3		Lecture: ppt	MT
			3	Demonstration and Laboratory practice:	

Teaching Period	Topics/Details	Number of hours		Methods: Teaching Media	Lecturer
		Theory*	Practice**		
				Dermatological examination	
19	Equine emergency	3		Lecture: ppt	RP
	Total hours of the entire semester	66	24		

2. Plan for Assessment of Expected Course-Level Learning Outcomes (CLOs)

2.1 Measurement and Evaluation of learning achievement

A. Formative Assessment

The assessment is performed during the course to measure the progress and development of students' learning by observing the behavior change and improvement of students' behavior and performance. The assessment results will be notified to the students (feedback) so that the students are constantly able to improve themselves. The assessment results are not included with the test scores at the end of the course.

B. Summative Assessment

(1) Tool and weight for measurement and evaluation

Learning Outcomes	Evaluation Method*			Weight (Percentage)
	MCQ	Short answer	Group presentation	
CLO1 Explain the major problems in these body systems: dental and gastrointestinal tract, respiratory, neurology, ophthalmology, integument, cardiovascular, musculoskeletal, endocrine and metabolic, and also include the age-related problems (neonatal, foal, and geriatric), infectious disease, and emergency situation	15	9	1	25

CLO2 Select and/or perform the appropriate way to diagnose the horse's problems	15	9	1	25
CLO3 Explain the step for correcting the horse's problems, adjusting the stable management, caring step and/or rehabilitation program after treatment	15	9	1	25
CLO4 Plan the prevention program, disease surveillance, and quarantine to limit the outspread of infectious disease	15	4	1	20
CLO5 Evaluate the prognosis and complication of the horse's problem	2.5	2.5		5
รวม	62	33	4	100

(2) Measurement and evaluation

The measurement and evaluation use either the criteria-based or group-based system, according to the conditions and methods for academic results evaluation of the Faculty of Veterinary Science, Mahidol University. The grading symbols are: A, B+, B, C+, C, D+, D, and F. Students must receive a 'D' grade or above to pass the criteria.

(3) Re-examination (if the course allows any.)

In case that students received an 'F' grade, the course coordinator and the program's Teaching and Learning Development Committee should, altogether, agreed to allow the students to take the re-examination or extra-course work to pass the course with the following conditions.

For the course with the mean score is higher than 75.00 and the minimum score is not less than 45.00. Students must receive the score higher than 47.50 to take to re-examination or extra-course work.

For the course with the mean score between 60.00 – 74.99, students must receive the score higher than 40.00. However, when the mean score is less than 60.00, students, then, should receive the score higher than 40.00 in order to take the re-examination or extra-course work.

Once students took the re-examination (extra-course work) and the course coordinator had considered the students' re-examination/course work to pass the criteria, then the students will receive the 'D' grade. While waiting for the re-examination or extra-course work result, the students' score should be indicated as 'I' grade.

3. Students' Appeal

Should the students have any suspicion or appeals to the teaching and learning activities and the grade assessment, students could make the appeal by filling in the form at MUVS' Academic Affairs. The appeal will be proposed to the course coordinator to consider the request. If the appeal could not be addressed at this point, it will be further process by the program's Teaching and Learning Development Committee. In case that the committee suggested further investigation should be done, the appeal will be purposed to the faculty's appealing committee to address the issue.

Section 6 Teaching Resources

1. Required Texts

1. Reed MS, Bayly WM, editors. Equine Internal Medicine. Philadelphia: W.B.Saunders; 1998.
2. Pinsent PJN, Fuller CJ, 2nd ed. Outline of Clinical Diagnosis in the Horse. Victoria: Blackwell Science; 1997.
3. Rose RJ, Hodgson DR. Manual of Equine Practice. Philadelphia: W.B. Saunders; 1993.
4. Bertone J, Horspool LJI. Equine Clinical Pharmacology. Philadelphia: W.B. Saunders; 2004.
5. Hadrill D. Horses health care. London: ITDG Publishing; 2002.
6. Ross MW, Dyson SJ. Lameness in the horse. Philadelphia: W.B. Saunders; 2003.
7. Bertone J. Equine Geriatrics Medicine and Surgery. Philadelphia: W.B. Saunders; 2005.
8. Hinchcliff K, Kaneps A, Geor R, Bayly W. editors. Equine Sports Medicine and Surgery. Philadelphia: W.B. Saunders; 2004. 15.9 Clegg P, Singer E. 4th ed. Lecture Notes in Equine Orthopedics. Division of equine studies, Faculty of Veterinary Sciences, University of Liverpool; 2009
9. Stashak TS, Adams OR. Adams' Lameness in Horse. Williams & Wilkins; 2002

2. Suggested Materials

1. Kenneth Hinchcliff. 2004. Equine Sports Medicine and Surgery, SAUNDERS, Philadelphia, Sydney.
2. Mike W. Ross and Sue J. Dyson 2003. Lameness in the horse. Saunders, Philadelphia, Sydney.

3. Other Resources (if any)

N/A

Section 7 Evaluation and Improvement of Course Implementation

1. Strategy for Course Effectiveness Evaluation by Students

At the end of each course, it is required for the students to assess the teaching of each instructor based on the following criteria: punctuality, good role model, application of morals and ethics for the instruction, ability to convey knowledge and encourage students to learn, giving opportunities for students to ask questions and to comment during the study.

The overall outcomes of each course will also be assessed by the students for the following issues: the instructor's knowledge and competency, the course's effectiveness, student's satisfaction with the study, and other comments from students. The evaluation is conducted through online platform.

2. Strategy for Teaching Evaluation

The instructors or the course coordinators are assigned to conduct the evaluation as follows.

2.1 the students' evaluation for the instruction and overall outcomes of the course in accordance to criteria mentioned in No. 1 – Strategy for Course Effectiveness by Students.

2.2 The instructors must perform self-assessment for the following criteria.

- (1) Appropriate time spent to prepare for the teaching.
- (2) The instructor's satisfaction with the teaching results.
- (3) Solutions or recommendations for the program's teaching improvement or self-improvement for the next class/academic year.

3. Teaching Improvement

Prior to each academic year, there are meetings/seminars for the instructors of each course to plan to improve the course's teaching and learning management based on the following information.

- (1) the students' academic performance
- (2) the students' evaluation results
- (3) the instructors' assessment results

4. Verification of Standard of Learning Outcome for the Course

The verification of the standard of the Learning Outcome for the Course is conducted by the course coordinators based on the following aspects.

1. The goals of the learning outcomes are clear and feasible.
2. The learning experience is aligned with the expected goals.
3. The learning experience encourages the students to research and practice self-learning skills.
4. The evaluation methods are appropriate to assess the expected goals and learning experience.

5. The program applied the educational theory and the results from the previous evaluation to plan for improvement.

At the end of each academic year, the course coordinators, instructors, the Program Committee, and the Teaching and Learning Development Committee will consider the assessment results and the Learning Outcome for the Course to plan for the improvement of the next academic year.

Appendix

Relations between the course and the program

Table 1 Relations between the course and the PLOs

Course Name Equine Medicine (Course Code) VSCL 551	PLOs							
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
	R	P	R	R	R	R		

Remarks: Show the level of the course management with the symbols I, R, P, and M. This must correspond to the curriculum mapping written in the TQF2

Table 2 Relations between CLOs and PLOs

(Course Code) VSCL 551	PLOs							
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
CLO1 Explain the major problems in these body systems: dental and gastrointestinal tract, respiratory, neurology, ophthalmology, integument, cardiovascular, musculoskeletal, endocrine and metabolic, and also include the age-related problems (neonatal,	1.1						7.1	

foal, and geriatric), infectious disease, and emergency situation								
CLO2 Select and/or perform the appropriate way to diagnose the horse's problems	1.1	2.1 2.4					7.1	
CLO3 Explain the step for correcting the horse's problems, adjusting the stable management, caring step and/or rehabilitation program after treatment	1.1 1.2	2.2 2.6					7.2 7.3	
CLO4 Plan the prevention program, disease surveillance, and quarantine to limit the out-spread of infectious disease	1.2						7.2 7.3	
CLO5 Evaluate the prognosis and complication of the horse's problem	1.1 1.2							