



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

## TQF 3 Course Specification

### Section 1 General Information

#### 1. Course Code and Title

In Thai

สพวค ๖๘๓ คลินิกปฏิบัติศัลยกรรมสัตว์เล็ก ๒

In English

VSCL 683 Clinical Clerkship in Small Animal Surgery II

#### 2. Number of Credits 3 (0-9-3) (Theory-Practice-Self-study)

(Theory- hrs. Practice 9 hrs. Self-Study 3 hrs./week)

#### 3. Curriculum and Course Type

3.1 Curriculum Bachelor Degree Program (Thai)

3.2 Course Type Elective course

#### 4. Course Coordinator and Lecturers

##### 4.1 Course Coordinator

4.1.1 Lect. Dr. Grisnarong Wongbandue (GW) Department of Clinical Science and Public Health

Contact: 2237 E-mail address: grisnarong.won@mahidol.edu

4.1.2 Lect. Dr. Sekkarin Ploypetch (SP) Department of Clinical Science and Public Health

Contact: 2212 E-mail address: sekkarin.plo@mahidol.edu

##### 4.2 Lecturers

4.2.1 Assoc. Prof. Dr. Sukanya Manee-In (SM) Department of Clinical Science and Public Health

Contact: 2216 E-mail address: sukanya.man@mahidol.edu

4.2.2 Lect. Dr. Grisnarong Wongbandue (GW) Department of Clinical Science and Public Health

Contact: 2237 E-mail address: grisnarong.won@mahidol.edu

4.2.3 Assist. Prof. Dr. Nawarus Prapaiwan (NP) Department of Clinical Science and Public Health

Contact: 2213 E-mail address: nawarus.pra@mahidol.edu

4.2.4 Lect. Dr. Panithi Sukho (PSK) Department of Clinical Science and Public Health

Contact: 2256 E-mail address: panithi.suk@mahidol.edu

4.2.5 Lect. Dr. Ruangrat Budtironkawat (RBD) Department of Clinical Science and Public Health

Contact: 2210 E-mail address: ruangrat.bud@mahidol.ac.th



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

4.2.6 Lect. Dr. Sekkarin Ploypecth (SP) Department of Clinical Science and Public Health

Contact: 2212 E-mail address: sekkarin.plo@mahidol.edu

4.2.7 Lect. Dr. Kewwaree Hommuang (KH) Department of Clinical Science and Public Health

Contact: 2210 E-mail address: kewwaree.hom@mahidol.ac.th

4.2.8 Lect. Dr. Yada Janhiran (YJ) Department of Clinical Science and Public Health

Contact: 2210 E-mail address: yada.jan@mahidol.ac.th

## 5. Semester/Class Level

5.1 Semester 2/ Year4

5.2 Number of Students Allowed 80 Students

## 6. Pre-requisite:

VSCL 450 Small Animal Surgery

## 7. Co-requisites : -

## 8. Study Site Location Faculty of veterinary science, Mahidol University

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

3 March 2020

## Section 2 Aims and Objectives

### 1. Course Goals

The course aims to extend student experience and confidence to perform general anesthesia and soft tissue surgery involving integument system, urinary system, gastrointestinal system, reproductive system, and digestive system incorporating to post-operative management, based upon the professional ethics and morals.

### 2. Objectives of Course Development/Revision

#### 2.1 Course objective

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

1. Apply effective approaches for general anesthesia, pain management and post-operative care for castration and ovariohysterectomy in dogs and cats.
2. Proficiently perform castration and ovariohysterectomy
3. Operate on surgical assistant in complicated soft tissue surgery cases



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

4. Spontaneously manage surgical wounds and common post-operative complication
5. Effectively communicate with colleagues, surgical staff, and pet owners

## 2.2 Course-level Learning Outcomes: CLOs)

CLO1 Skillfully perform castration and ovariohysterectomy in dogs and cats

CLO2 administrate analgesic drugs in pre-, intra-, and postoperative surgeries base on pain assessment

CLO3 Solve the complications of general anesthesia and pre-, intra-, and postoperative surgery

CLO4 Fluently operate on sterile techniques, surgical instrument handling, wound suturing and ligation

CLO5 Select suitable post-operative management and surgical wound care for specific procedures

CLO6 Effectively communicate with colleagues, staff, and pet owners conducting to goals of each procedure

## Section 3 Course Description and Implementation

### 1. Course Description

Clinical practices in the soft tissue surgery of dogs and cats; diagnosis, surgical instruments, preanesthetic evaluation, anesthetic monitoring; post-operative care, complications and client communication

### 2. Number of hours per semester

| Theory<br>(hours) | Practice<br>(hours) | Self-study<br>(hours) |
|-------------------|---------------------|-----------------------|
| -                 | 135                 | 45                    |

### 3. Number of Hours per Week for Individual Advice

Not less than 1 h./week (if need, private appointment with lecturers)



Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master  
☐ Higher Graduate Diploma ☐ Doctor

Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Faculty of veterinary science

## 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:

CLO1 Skillfully perform castration and ovariohysterectomy in dogs and cats

CLO2 Administrate analgesic drugs in pre-, intra-, and postoperative surgeries base on painassessment

CLO3 Solve the complications of general anesthesia and pre-, intra-, and postoperative surgery

CLO4 Fluently operate on sterile techniques, surgical instrument handling, wound suturing and ligation

CLO5 Select suitable post-operative management and surgical wound care for specific procedures

CLO6 Effectively communicate with colleagues, staff, and pet owners conducting to goals of each procedure

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 |         |                |
|------|---------------------------------------------|----------|------------------|--------------------------------|---------|----------------|
|      | Demonstrate                                 | Practice | Group discussion | MCQ                            | Rubrics | Practical exam |
| CLO1 |                                             | x        | x                |                                |         | x              |
| CLO2 |                                             | x        | x                |                                | x       |                |
| CLO3 |                                             | x        | x                |                                | x       |                |
| CLO4 | x                                           | x        |                  |                                | x       |                |
| CLO5 | x                                           | x        | x                |                                | x       |                |
| CLO6 | x                                           | x        | x                |                                | x       |                |



Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master  
☐ Higher Graduate Diploma ☐ Doctor

Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Faculty of veterinary science

## SECTION 5 LESSON PLAN AND EVALUATION

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

| Weeks | Topics/ Description                                                             | studies (hours).  |          | Learning programs and techniques          | Lecturers |
|-------|---------------------------------------------------------------------------------|-------------------|----------|-------------------------------------------|-----------|
|       |                                                                                 | In class Activity | Practice |                                           |           |
| 1     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice                                  | Lecturers |
| 2     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice                                  | Lecturers |
| 3     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice                                  | Lecturers |
| 4     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice and Clinical discussion/ consult | Lecturers |
| 5     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice                                  | Lecturers |
| 6     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice                                  | Lecturers |
| 7     | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |                   | 9        | Practice                                  | Lecturers |



Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Faculty of veterinary science

Course code: VSCL 683

|    |                                                                                 |  |     |                                                   |           |
|----|---------------------------------------------------------------------------------|--|-----|---------------------------------------------------|-----------|
| 8  | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice and<br>Clinical discus-<br>sion/ consult | Lecturers |
| 9  | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice                                          | Lecturers |
| 10 | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice and                                      | Lecturers |
| 11 | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice                                          | Lecturers |
| 12 | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice and<br>Clinical discus-<br>sion/ consult | Lecturers |
| 13 | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice                                          | Lecturers |
| 14 | -General anesthesia<br>-Castration, Ovariohysterectomy,<br>-Soft tissue surgery |  | 9   | Practice                                          | Lecturers |
| 15 | Anesthesia, Soft tissue surgery,<br>Dentistry, and<br>Ophthalmologic surgery    |  | 9   | Practice and<br>Clinical discussion/<br>consult   | Lecturers |
|    | Total                                                                           |  | 135 |                                                   |           |

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



Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master  
☐ Higher Graduate Diploma ☐ Doctor

Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Faculty of veterinary science

Course code: VSCL 683

## 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<br>(Percentage) |
|-----------------------------------------------------------------------------------------------------------|----------------------|--------------|------------------------|
|                                                                                                           | Clinical examination | Rubric score |                        |
| CLO1 Skillfully perform castration and ovariectomy in dogs and cats                                       | 20                   |              |                        |
| CLO2 Administrative analgesic drugs in pre-, intra-, and postoperative surgeries base on pain assessment  |                      | 20           |                        |
| CLO3 Solve the complications of general anesthesia and pre-, intra-, and postoperative surgery            |                      | 20           |                        |
| CLO4 Fluently operate on sterile techniques, surgical instrument handling, wound suturing and ligation    |                      | 20           |                        |
| CLO5 Select suitable post-operative management and surgical wound care for specific procedures            |                      | 10           |                        |
| CLO6 Effectively communicate with colleagues, staff, and pet owners conducting to goals of each procedure |                      | 10           |                        |



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

|       |    |    |     |
|-------|----|----|-----|
| Total | 20 | 80 | 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



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

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. Slatter DH. Textbook of small animal surgery. 3rd ed. Philadelphia: W. B. Saunders, Philadelphia; 2003
2. Fossum TW, et al., Small Animal Surgery. 4<sup>th</sup> revised ed., St Louis, United States: Mosby; 2016
3. Tobias K and Johnson S., Veterinary Surgery: Small animal 1 and 2. 1<sup>st</sup> ed. W. B. Saunders, Philadelphia; 2011
4. Kurt A. Grimm et al., Veterinary Anesthesia and Analgesia: The Fifth Edition of Lumb and Jones. Wiley-Blackwell; 2015
5. Brinker, Piermattei, and Flo's. Handbook of Small Animal Orthopedics and Fracture Repair 4<sup>th</sup> ed., W. B. Saunders, Philadelphia; 2006
6. Johnson K. Piermattei's Atlas of Surgical Approaches to the Bones and Joints of the Dog and Cat 5th ed., W. B. Saunders, Philadelphia; 2013

## 2. Suggested Materials

1. Clinical Clerkship in Small Animal Surgery Rotational introduction booklet
2. Journal of Veterinary Surgery. Online ISSN: 1532-950X, ©American College of Veterinary Surgeons.
3. Journal of Veterinary Anaesthesia and Analgesia. ISSN: 1467-2987, Elsevier.
4. Journal of American Veterinary Medical Association. ISSN: 0003-1488, ©American Veterinary Medical Association.
5. Medical Association.
6. Journal of American Animal Hospital Association. ISSN: 0587-2871, ©American Animal Hospital Association



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

## 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



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master

☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science

#### 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:<br>Clinical<br>Clerkship in<br>Small Ani-<br>mal Surgery I | PLOs |      |      |      |      |      |      |      |
|-------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
|                                                                         | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 | PLO6 | PLO7 | PLO8 |
| VSCL 683                                                                | M    | M    |      |      |      |      | P    | P    |

**Table 2** Relations between CLOs and PLOs



Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master  
☐ Higher Graduate Diploma ☐ Doctor

Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Faculty of veterinary science

Course code: VSCL 683

| VSCL 450                                                                                                  | PLOs |      |      |      |      |      |      |      |
|-----------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
|                                                                                                           | PLO1 | PLO2 | PLO3 | PLO4 | PLO5 | PLO6 | PLO7 | PLO8 |
| CLO1 Skillfully perform castration and ovario-hysterectomy in dogs and cats                               |      | x    |      |      |      |      |      | x    |
| CLO2 Administrate anal-gesic drugs in pre-, intra-, and postoperative surgeries base on pain assessment   | x    | x    |      |      |      |      |      | x    |
| CLO3 Solve the complications of general anesthesia and pre-, intra-, and postoperative surgery            | x    | x    |      |      |      |      | x    |      |
| CLO4 Fluently operate on sterile techniques, surgical instrument handling, wound suturing and ligation    | x    | x    |      |      |      |      |      |      |
| CLO5 Select suitable post-operative management and surgical wound care for specific procedures            | x    | x    |      |      |      |      |      |      |
| CLO6 Effectively communicate with colleagues, staff, and pet owners conducting to goals of each procedure |      |      |      |      |      |      | x    | x    |



Program: Bachelor program in veterinary science

Course title: Clinical Clerkship in Small Animal Surgery I

Course code: VSCL 683

Academic degree level ☒ Bachelor ☐ Graduate Diploma ☐ Master  
☐ Higher Graduate Diploma ☐ Doctor

Faculty of veterinary science