TQF.3

☐ Bachelor's Degree

☑ Master's Degree

Course Specification

Course Code : MTH 5103

Course Title: Thesis 3

Credits: 6 Credits

Semester /Academic Year : 2/2019

Program: Master of Education Program in Mathematics Education

Semester: 2 **Academic Year:** 2019

International College, SuanSunandhaRajabhat University

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Section 1 General Information

1. Code and Course Title:
Course Code: ETH 5103
Course Title (English): Thesis 3
Course Title (Thai): วิทยานิพนธ์ ๓

2. Credits: 6 Credits

3. Curriculum and Course Category :

3.1 Curriculum: Master of Education Program in Mathematics Education
3.2 Course Category:
- ☐ General Education   ☑ Required Course
- ☐ Elective Course   ☑ Cluster in Thesis

4. Lecturers Responsible for Course and Instructional Course Lectures:

4.1 Lecturer Responsible for Course:
Asst.Prof.Dr.Supotch Chaiyasang
4.2 Instructional Course Lecturers:
(1) Assoc.Prof.Chaweewan Kaewsaiha
(2) Dr.Kanokrat Kunasaraphan

5. Contact / Get in Touch:

Room Number 2121   Tel. 02-160-1200
E-mail: k_kade@yahoo.com

6. Semester / Year of Study:

6.1 Semester: 2/2019   Year of Study: Graduate Student Year 2
6.2 Number of students enrolled: 2

7. Prerequisite Course

ETH5101 Thesis 1 and ETH5102 Thesis 2

8. Co-requisite Course :

None

9. Learning Location

Building Number**:** 21   Room No. 2122

Wednesday 9.00 – 16.00

10. Last Date for Preparing and Revising this Course:

December 15, 2018

Section 2 Aims and Objectives

1. Course Aims

At the end of this course, the student will reach to six domains in the following areas of performance:

1.1 Morals and Ethics

(1) Have core values of honesty and integrity in intellectual work;
(2) Have discipline and acknowledging the sources upon the Thesis;
(3) Have knowledge and understanding of University Regulations for submission the Thesis.

1.2 Knowledge

(1) Be able to develop an action research using innovation or technology to solve mathematics classroom problems;
(2) Be able to illustrate concepts, questions and theories related to the proposed research;
 (3) Be able to integrate all of knowledge of courses to complete the Thesis.

1.3 Cognitive Skills

(1) Be able to provide for drafting and revising sections of the Thesis;
(2) Be able to use rhetorical and grammatical principles of writing effective Thesis;

(3) Have academic skills to design action research clearly in the form of a formal multi-chapter master's thesis manuscript, structured that meet Graduate Program Studies (revised B.E.2553).

1.4 Interpersonal Skills and Responsibility

(1) Have responsibility for building positive attitude towards the research process;

(2) Be able to identify problems and seek best solutions;

(3) Be aware of research obligations and limitation for developing learners.

1.5 Numerical Analysis, Communication and Information Technology Skills

(1) Be able to apply numerical analysis in problem solving;

(2) Have concepts, principles, and theories of technology and innovation that promote the learning quality development;

(3) Be able to design, create, implement, evaluate innovation for improvement learning environment.

1.6 Learning Management Skills

(1) Be able to design learning activities and learning environments for learners' intellectual, emotional, and behavioral engagement;

(2) Be able to provide the learners with essential opportunities to enhance learning concepts in mathematical process for problem solving through assessment and evaluation processes;

(3) Be able to monitor, assess and evaluate for learners' performance growth.

2. Purposes for Developing / Revising Course (content / learning process / assessment / etc.)

According to TQF (Thailand Quality Framework: HEd.) and the Teachers' Council of Thailand with the standards of professional knowledge and experience for requirement courses, graduate students program in mathematics education should have essence of knowledge and skills to promote learners' achievement.

Section 3 Course Structure

1. Course Outline

Complete thesis under the supervision and approval of advisors, and ready to be published in domestic or international academic journal/ publication, having peer review before being published; defense of thesis in accordance with the university regulation.

2. Time Length per Semester (Lecture – hours / Practice – hours/ Self Study – hours)

Lecture	Practice/ Field Work/Internship	Self Study	Remedial Class
96 hours	-	192 hours	3+ (if any)

3. Time Length per Week for Individual Academic Consulting and Guidance

At least 6 hours / week

Section 4 Developing Student's Learning Outcomes

Learning Standards/Outcomes	Learning Activities	Learning Assessment
1. Ethics and Morals (1) Have core values of honesty and integrity in intellectual work; (2) Have discipline and acknowledging the sources upon the Thesis; (3) Have knowledge and understanding of University Regulations for submission the Thesis.	Work individually to discuss with Thesis advisor.	Presentation complete thesis

Learning Standards/Outcomes	Learning Activities	Learning Assessment
2. Knowledge (1) Be able to develop an action research using innovation or technology to solve mathematics classroom problems; (2) Be able to illustrate concepts, questions and theories related to the proposed research; (3) Be able to integrate all of knowledge of courses to complete the Thesis.	1. Revise the components of Thesis according to guideline in Handbook of Graduate School (SSRU). 3. Have the students develop their plans to submit to international conference.	1. Complete of the thesis 2. Presentation abstract and full paper
3. Cognitive Skills (1) Be able to provide for drafting and revising sections of the Thesis; (2) Be able to use rhetorical and grammatical principles of writing effective Thesis; (3) Have academic skills to design action research clearly in the form of a formal multi-chapter master's thesis manuscript, structured that meet Graduate Program Studies (revised B.E.2553).	1. Use research-based learning and internet-based learning to construct cognitive skills in writing the Thesis report. 2. Discussion and presentation of research findings – students write reports and other forms of work documentation to include in their Thesis draft or oral presentation their findings from discussion / searching information.	1. Individual thesis (complete thesis) 2. Presentation complete thesis
4. Interpersonal Skills and Responsibilities		1. Abstract

Learning Standards/Outcomes	Learning Activities	Learning Assessment
(1) Have responsibility for building positive attitude towards the research process; (2) Be able to identify problems and seek best solutions; (3) Be aware of research obligations and limitation for developing learners.	1. Use research-based learning and internet-based learning for doing action research. 2. Students prepare abstract and full paper for submission to international conference.	2. Full paper
5. Numerical Analysis, Communication and Information Technology Skills (1) Be able to apply numerical analysis in problem solving; (2) Have concepts, principles, and theories of technology and innovation that promote the learning quality development; (3) Be able to design, create, implement, evaluate innovation for improvement learning environment.	. Use research-based learning and internet-based learning to analyze data and interpret data for research objectives. 2. Students use mathematics program in computer to complete the Thesis writing.	1. Individual complete thesis 2. Statistical formula in analyzing data

Learning Standards/Outcomes	Learning Activities	Learning Assessment
6. Learning Management Skills (1) Be able to design learning activities and learning environments for learners' intellectual, emotional, and behavioral engagement; (2) Be able to provide the learners with essential opportunities to enhance learning concepts in mathematical process for problem solving through assessment and evaluation processes; (3) Be able to monitor, assess and evaluate for learners' performance growth.	. Use techniques for learning management skills: integration of contents for learner-oriented learning management as shown in research methodology. Discussion and presentation of learning and teaching theories and research on the learning of mathematics, development of mathematical thinking and knowledge in school and other settings.	1. Individual complete thesis. 2. Oral presentation

Section 5 Lesson Plan and Assessment

Under the supervision of advisors.

1.Lesson Plan

Week	Topic/Outline	Hours	Learning Activities and Medias
1-2	• Feedback and evaluation of Chapter 1 Introduction in writing the thesis.	6	• Students discussion with the thesis advisor
3-5	• Feedback and evaluation of Chapter 2 Review of Literature– texts, academic papers, and/or research	9	• Students discussion with the thesis advisor • *Integrating research titled "Comparing Mathematics Education Students' Learning and Attitudes between Pedagogy Content Knowledge and Practicing in Schools"*
6-10	• Feedback and evaluation of Chapter 3 Research methodology related to research questions and objectives	15	• Students discussion with the thesis advisor • Students submit complete thesis (Chapter 1 to Chapter 5) to the thesis committee • Oral presentation
11-17	• Feedback and evaluation of Chapter 4 Research results, abstract, and full paper for submission to international conference	21	• Students discussion with the thesis advisor • Students submit complete thesis (Chapter 1 to Chapter 5), abstract, full paper to the thesis advisor and thesis committee • Defense thesis

2. Learning Assessment Plan

Learning Outcomes	Assessment Activities	Time Schedule (Week)	Proportion for Assessment (%)
1. Ethics and Morals (1) Have core values of honesty and integrity in intellectual work; (2) Have discipline and acknowledging the sources upon the Thesis; (3) Have knowledge and understanding of University Regulations for submission the Thesis.	1. Individual thesis discussion with advisor	Throughout semester	5 %
2. Knowledge (1) Be able to develop an action research using innovation or technology to solve mathematics classroom problems; (2) Be able to illustrate concepts, questions and theories related to the proposed research; (3) Be able to integrate all of knowledge of courses to complete the Thesis.	1. Individual thesis discussion with the advisor	Throughout semester	40 %

Learning Outcomes	Assessment Activities	Time Schedule (Week)	Proportion for Assessment (%)
3. Cognitive Skills (1) Be able to provide for drafting and revising sections of the Thesis; (2) Be able to use rhetorical and grammatical principles of writing effective Thesis; (3) Have academic skills to design action research clearly in the form of a formal multi-chapter master's thesis manuscript, structured that meet Graduate Program Studies (revised B.E.2553).	1. Individual thesis discussion with the advisor	Throughout semester	30 %
4. Interpersonal Skills and Responsibilities (1) Have responsibility for building positive attitude towards the research process; (2) Be able to identify problems and seek best solutions; (3) Be aware of research obligations and limitation for developing learners.	1. Individual thesis discussion with the advisor	Throughout semester	5 %
5. Numerical Analysis, Communication and Information Technology Skills			

Learning Outcomes	Assessment Activities	Time Schedule (Week)	Proportion for Assessment (%)	
(1) Be able to apply numerical analysis in problem solving; (2) Have concepts, principles, and theories of technology and innovation that promote the learning quality development; (3) Be able to design, create, implement, evaluate innovation for improvement learning environment.	1. Individual thesis discussion with the advisor	Throughout semester	10 %	
6. Learning Management Skills (1) Be able to design learning activities and learning environments for learners' intellectual, emotional, and behavioral engagement; (2) Be able to provide the learners with essential opportunities to enhance learning concepts in mathematical process for problem solving through assessment and evaluation processes; (3) Be able to monitor, assess and evaluate for	1. Individual thesis discussion with the advisor 2. Individual presentation	Throughout semester	10 %	

Learning Outcomes	Assessment Activities	Time Schedule (Week)	Proportion for Assessment (%)
learners' performance growth.			

Section 6 Learning and Teaching Resources

1. Textbook and Main Documents

Stringer, E.T.(2007). *Action Research (Third Edition).*London: SAGE
　　Publication.

2. Important Documents for Extra Study

American Psychological Association.(2010). Publication Manual of the
　　America Psychological Association (6th edition). Washington, DC:
　　American Psychological Association.

3. Suggestion Information (Printing Materials/Website/CD/Others)

Website:

http://atcm.mathandtech.org

http://grad.ssru.ac.th/index.php/th/

CD:

Graduate School SuanSunandhaRajabhat University.(2018).
Orientation for Graduate Students : Academic Year 2018.

Section 7 Course Evaluation and Revising

1. Strategies for Course Evaluation by Students

Using survey questions to collect information from the students' opinions to improve the course and enhance the curriculum. Examples of questions:

(1) Content objectives were made clear to the students.

(2) The content was organized around the objectives.

(3) Content was sufficiently integrated.

(4) Content was sufficiently integrated with the rest of the first year curriculum.

(5) The instructional materials used were effectively.

(6) The learning methods appropriate assessed the students' understanding of the content.

(7) Overall, Students are satisfied with the quality of this course.

2. Strategies for Course Evaluation by Lecturer

2.1 Responsible Curriculum team discusses the results as follow:

(1) The thesis advisor is well prepared for giving the feedback and evaluation.

(2) The thesis advisor answers questions carefully and completely.

(3) The thesis advisor uses examples to make the materials easy to understand.

(4) The thesis advisor stimulated interest in the course.

(5) The thesis advisor is knowledgeable about the topics presented in student's Thesis.

(6) The thesis advisor treats students respectfully.

(7) The thesis advisor is fair in dealing with students.

(8) The thesis advisor makes students feel comfortable about asking question.

2.2 The Director /Head of program construct assessment items to evaluate three dimensions of lecturer's competencies : content knowledge, procedural knowledge, and attitudes.

3. Teaching Revision

Responsible Curriculum team revises teaching/learning process based on the results from the students' survey questions, and classroom research.

4. Feedback for Achievement Standards

International College Administrator Committee monitor to assessment process and Grading.

5. Methodology and Planning for Course Review and Improvement

(1) Revise and develop course structure and process every two years.

(2) Assign different lecturers teach this course to enhance students' performance.

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