TQF.5 Course Report

Course Code: MMA1302

Course Title: Dynamic Software in Mathematics Education

Credits: 3(3-0-6)

Semester /Academic Year: 1/2021

Students: Bachelor of Education Program in Mathematics Education (Bilingual Program)

Lecturers: Asst.Prof. Dr. Krongthong Khairiree

College of Hospitality Industry Management

Suan Sunandha Rajabhat University

Course Report

Institution: Suan Sunandha Rajabhat University

Campus/Faculty/Department: College of Hospitality Industry Management

Section1: General Information

1. **Course Code and Title**: MMA1302 Dynamic Software in Mathematics Education

2. **Pre-requisite (if any):** None

3. **Faculty Member(s) Teaching the Course and Sections**

    Asst.Prof. Dr. Krongthong Khairiree

    Tueday 13.00-16.00 (Online and on demand)

4. **Semester and Academic Year**

    Semester 1, Academic Year 2021

5. **Venue**

    College of Hospitality Industry Management, Suan Sunandha Rajabhat University (Salaya Campus)

Section 2: Actual Teaching Hours Compared with Teaching Hours Specified in the Teaching Plan

1. **Number of actual teaching hours compared with the teaching plan**

Topics	No. of teaching hours in the plan	No. of actual teaching hours	Reason(s) (in case the discrepancy is more than 25%)
Course Introduction - Course outlines - Grading criteria **Pre-Test** **Chapter 1**: Introduction to dynamic software program in mathematics	3	3	-

Topics	No. of teaching hours in the plan	No. of actual teaching hours	Reason(s) (in case the discrepancy is more than 25%)
Chapter 2: Principle of using the Geometer's Sketchpad (GSP) in mathematics and animation -Transformation Geometry using GSP -Exemplar of Transformation Geometry using GSP	9	9	-
Chapter 3: Transformation, Symmetry, and Tessellations using GSP -Exploring Geometry: Circle with GSP -Exploring Geometry: Pythagorean Theorem with GSP	9	9	-
Midterm			
Chapter 4: Exploring Geometry: Similarity with GSP **-Project Work Assignments & Activities**	3	3	-
Chapter 5: Exploring Algebra with GSP -Constructing Conic Sections: Parabola, Circles, Ellipse, and Hyperbola with GSP	9	9	-
Chapter 6: Developing instructional materials in mathematics using GSP incorporate with AR/AI.	6	6	Integrated innovation and technology for mathematics
Chapter 7: Exploring Trigonometric Ratio and Trigonometric Functions -Discovering Statistics with TinkerPlots/Fathom	6	6	Integrated innovation and technology for mathematics

Topics	No. of teaching hours in the plan	No. of actual teaching hours	Reason(s) (in case the discrepancy is more than 25%)
Total	**45**	**45**	

2. Topics that couldn't be taught as planned

Topics that couldn't be taught (if any)	Significance of the topics that couldn't be taught	Compensation
None	None	None

3. Effectiveness of the teaching methods specified in the Course Specification

Learning Outcomes	Teaching methods specified in the course specification	Effectiveness (Use ✓)		Problems of the teaching method(s) (if any) and suggestions
		Yes	No	
1. Morals and Ethics	Problem and Practice Based Learning	✓	-	-
2. Knowledge	Problem-Based and Computer-Based Learning	✓	-	-
3. Cognitive Skills	Problem-Based and Computer-Based Learning	✓	-	-

Learning Outcomes	Teaching methods specified in the course specification	Effectiveness (Use ✓)		Problems of the teaching method(s) (if any) and suggestions
		Yes	No	
4. Interpersonal Skills and Responsibilities	Cooperative Learning: Think-Pair-Share	✓	-	-
5. Numerical Analysis, Communication and Information Technology Skills	Inquiry-based and Internet-Based Learning	✓	-	-
6. Learning Management Skills	Problem-Based and Application Tools in Mathematics	✓	-	-

4. Suggestions for Improving Teaching Methods

Using problem solving and ICT-based approach as teaching strategies.

Section 3: Course Outcomes

1. **Number of registered students**: 20 students

2. **Number of students at the end of semester**: 20 students

3. **Number of students who withdrew (W)**: none

4. **Grade distribution**

Grade	No. of students	Percentage
A	13	65.00
A-	6	30.00
B+	1	5.00
B	-	-
B-	-	-
C^+	-	-
C	-	-
C-	-	-

Grade	No. of students	Percentage
D+	-	-
D	-	-
D-	-	-
F	-	-
Incomplete (I)	-	-
Total	20	100.00

5. Factors causing unusual distribution of grades (If any)

None

6. Discrepancies in the evaluation plan specified in the Course Specification

6.1 Discrepancy in evaluation time frame

Details of Discrepancy	Reasons
Using online test / take home test for three hours according to academic announcement.	COVID 19 pandemic

6.2 Discrepancy in evaluation methods

Details of Discrepancy	Reasons
Using online test / take home test	COVID 19 pandemic

7. Verification of students' achievements

Verification Method(s)	Verification Result(s)
Program Committee Approval	Approved

Section 4: Problems and Impacts

1. Teaching and learning resources

Problem:	Impacts on students' learning:
Due to students were limited to use computer or mobile devices.	Some students could not connect the program, but the students can download lessons from lecturer's

	website.

2. Administration and organization

Problems from administration None	Impacts on students' learning None
Problems from organization None	Impacts on students' learning None

Section 5: Course Evaluation

1. Results of course evaluation by students

1.1 Important comments from evaluation by students

Students had weaknesses in learning mathematics using English communication.

1.2 Faculty members' opinions on the comments in 1.1

The lecturers should engage students in learning activities by using English-Thai for understanding.

2. Results of course evaluation by other evaluation methods

2.1 Important comments from evaluation by other evaluation methods

The lecturers have to prepare alternative assessment to evaluate students' progression involving learning outcomes of the course.

2.2 Faculty members' opinions on the comments in 2.1

Considerations of methods of teaching and evaluation for students' improvement.

Section 6: Improvement Plan

1. Progress of teaching and learning improvement recommended in the previous Course Report

Improvement plan proposed in previous Academic year 2020. -None-	Results of the plan implementation

	-None-

2. Other improvements

Searching information for practicing English communication and designing concepts of learning mathematics with technology from online database

3. Suggestions for improvement for Semester 2 Academic year 2021

Suggestions	Time Frame	Responsible person
Collecting more materials and activities	December 2021	Assoc. Prof. Chaweewan Kaewsaiha

4. Suggestions of faculty member(s) responsible for the course

Integrating real-world problem solving for improving mathematical processes and skills.

Responsible Faculty Member/Coordinator:

Signature...Submission Date...................................

Chairperson/Program Director:

Signature...................................... …Receipt Date ....