



**SAMSEN WITTAYALAI SCHOOL
ENGLISH PROGRAM**

COURSE OUTLINE

Subject: Mathematics (MA31101)

Course Classification: Foundation Additional

Learning Period: 3 Periods/Week

Credit Unit: 1.5

Grade Level: Mattayomsuksa 4 (Grade 10)

Semester 1, Academic Year 2022

Learning Area: Mathematics

Samsenwittayalai School English Program

Teacher: Dr. Nattapong Bosuwan

I. COURSE DESCRIPTION

Wring sets; equality; empty set; finite sets; infinite sets; subsets; power sets; operations on sets; Venn diagram; applications of sets; statements; logic operations; truth values; equivalence; negation; tautology; reasoning.

II. INDICATORS / LEARNING OUTCOMES

1. Learners' reading, analytical thinking and writing skills meet the criteria prescribed by the educational institutions.
2. Learners' desirable characteristics meet the criteria prescribed by the educational institutions.
3. M 1.1.1 Understand and use the knowledge about sets to communicate in Mathematics.
4. M 1.1.2 Understand and use the knowledge about logic to communicate and reason.

III. TENTATIVE COURSE OUTLINE

Week	Topics / Contents	Indicators	Period(s)
1	Sets/Writing sets	1	4
2-3	Sets/Equality, Empty set, Finite Sets, and Infinite Sets	1	5
4	Sets/Subsets and Power Sets	1,3	3
5-6	Sets/Operations on Sets	3	5
7-8	Sets/Venn diagram	4	5
9-10	Sets/Applications	4	5
11	Logic/Statements	1	3
12-13	Logic/Logic Operations	3	6
14-15	Logic/Truth Values	3	6

16	Logic/Equivalence	2	3
17	Logic/Negation	3	3
18-19	Logic/Tautology	2	6
20	Logic/Reasoning	4	3

IV. Teaching Methods and Management

- | | | |
|---|--|-------------------------------------|
| <input checked="" type="checkbox"/> Experiment | <input checked="" type="checkbox"/> Lecture/Discussion | <input type="checkbox"/> Group work |
| <input checked="" type="checkbox"/> Individual work | <input type="checkbox"/> Game | <input type="checkbox"/> Song |
| <input checked="" type="checkbox"/> Self-learning | <input checked="" type="checkbox"/> Demonstration | <input type="checkbox"/> Role play |
| <input type="checkbox"/> Project | <input type="checkbox"/> Experience | <input type="checkbox"/> ICT |
| <input type="checkbox"/> Local Wisdom based | <input type="checkbox"/> Others | |

V. Teaching Materials/Supplements

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Handouts | <input checked="" type="checkbox"/> Worksheets | <input type="checkbox"/> Teacher's text book |
| <input type="checkbox"/> Graphs/ Diagrams | <input type="checkbox"/> Maps | <input checked="" type="checkbox"/> Pictures |
| <input type="checkbox"/> Samples/ Models | <input checked="" type="checkbox"/> Exercises | |
| <input type="checkbox"/> Commercial Text Book | | |
| <input type="checkbox"/> DVD/VCD | | |
| <input checked="" type="checkbox"/> Website Youtube | | |
| <input type="checkbox"/> Others | | |

VI. Assignment

No.	Assignment	Score (points)	Deadline	Type		Remark
				Individual	Group	
1.	Worksheet	5	Before Midterm Exam.	✓		
2.	Homework	10	Each week	✓		
3.	Quiz	10	Before Midterm Exam.	✓		
4.	Homework	10	Each week	✓		
5.	Worksheet	5	. Before Final Exam.	✓		

6.	Attendances	5	Each class	✓		
Total		45				

VII. ASSESSMENT AND EVALUATION

Indicator Score from SGS	Formative I		Midterm	Formative II				Final
	1			10	11	12	13	
Total score	10		15	10	10	15	20	20
1.Learners' reading, analytical thinking				10				
2. Learners' desirable characteristics					10			
3. SC2.1.1-10	10		15					
4. SC1.2.1-18						15	20	20
Total	10		15	55				20