



**SAMSEN WITTAYALAI SCHOOL
ENGLISH PROGRAM**

COURSE OUTLINE

Subject: Physics (SC30103)

Course Classification: Foundation

Learning Period: 1 Period/Week

Credit Unit: 1.0

Grade Level: Mattayomsuksa 5 (Grade 11)

Semester 1, Academic Year 2022

Learning Area: Science

Samsenwittayalai School: English Program

Teacher: Apichart Siriwitpreecha

I. COURSE DESCRIPTION

Studying concept of simple harmonic motion, characteristics and related quantities of simple harmonic motion, force and vibration of mass attached to a spring and simple pendulum, natural frequency and resonance.

By using the scientific processes, seeking knowledge, searching data, investigating, analyzing, comparing, explaining, discussing and conclude.

For improving the scientific knowledge and understanding so that the students can make use of the knowledge to make decision, develop scientific skill including the 21st century skills in information technology, critical thinking and problem– solving and communicating. They can also communicate the knowledge and can use the knowledge in every day’s life, leading to scientific mind, ethics, virtues and appropriate attitudes.

II. INDICATORS / LEARNING OUTCOMES

1. Learners’ reading, analytical thinking and writing skills meet the criteria prescribed by the respective educational institutions.
2. Learners’ desirable characteristics meet the criteria prescribed by the respective educational institutions.
3. Learners are able to describe concept and the characteristic of simple harmonic motion.
4. Learners are able to describe the motion of the object attached to a spring and related quantities.
5. Learners are able to describe the motion simple pendulum and related quantities.
6. Learners are able to describe the natural frequency and resonance of the object.

III. TENTATIVE COURSE OUTLINE

Week	Topics / Contents	Indicators	Period(s)
1.	Concept of simple harmonic motion	3	1
2.	Characteristic of simple harmonic motion	3	1
3.	Motion of the object attached to a spring 1/7	4	1
4.	Motion of the object attached to a spring 2/7	4	1
5.	Motion of the object attached to a spring 3/7	4	1
6.	Motion of the object attached to a spring 4/7	4	1
7.	Motion of the object attached to a spring 5/7	4	1
8.	Motion of the object attached to a spring 6/7	4	1
9.	Motion of the object attached to a spring 7/7	4	1
10.	Midterm Examination		
11.	Motion of the simple pendulum 1/5	5	1
12.	Motion of the simple pendulum 2/5	5	1
13.	Motion of the simple pendulum 3/5	5	1
14.	Motion of the simple pendulum 4/5	5	1
15.	Motion of the simple pendulum 5/5	5	1
16.	Natural frequency and resonance 1/4	6	1
17.	Natural frequency and resonance 2/4	6	1
18.	Natural frequency and resonance 3/4	6	1
19.	Natural frequency and resonance 4/4	6	1
20.	Final Examination		

IV. Teaching Methods and Management

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|---|--|--|
| <input checked="" type="checkbox"/> Experiment | <input checked="" type="checkbox"/> Lecture/Discussion | <input checked="" 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 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

- Handouts Worksheets Teacher's textbook
 Graphs/ Diagrams Maps Pictures
 Samples/ Models Exercises

VI. Assessment and Evaluation

Indicator/ Learning Outcome Score from SGS	Formative I				Midterm	Formative II						Final
	1	2	3	4		10	11	12	13	14	15	
Total score	5	5	5	5	20	10	10	5	5	5	5	20
1						10						
2							10					
3	5											
4		5	5	5								
5								5	5			
6										5	5	

VII. Assignment

SGS No.	Score (points)	Assignment	Deadline	Type	Remark
1	10	Homework	June	Individual	
2	10	Worksheet	July	Individual	
3	5	Quiz 1	June	Individual	
4	15	Quiz 2	August	Individual	
5	10	Worksheet	August	Individual	
6	10	Worksheet	September	Individual	