



**SAMSEN WITTAYALAI SCHOOL
ENGLISH PROGRAM**

COURSE OUTLINE

Subject: Technology (SC21161)
Learning Period: 2 Periods/Week (40 Hours)
Grade Level: Mattayomsuksa 1 (Grade 7)
Learning Area: Science & Technology
Teacher: *Mr. Donjie Mejia Bardos*

Course Classification: Foundation
Credit Unit: 1.0
Semester 2 Academic Year 2022
Samsenwittayalai School English Program

I. COURSE DESCRIPTION

The course is aimed to study and explain the meaning of “technology”. Analyze the causes or factors affecting the changes of technology and how technological systems work. Apply knowledge, skills, and resources through analysis, comparison, and selection of necessary data, to create solutions to problems in daily life.

By studying the abstract ideas: the selection of characteristics necessary for solving problems and methods, fixing the development of pseudo codes and flow charts, practicing designing and creating easy programs with variables, conditions, repetitions and loops to solve mathematical or scientific problems by using software and internet services in data management, identity management, primary data collection, data processing, and effective decision making in building alternatives and evaluating.

For applying the knowledge and developing it in their daily life. It encourages students to design solutions of the problems by analyzing, comparing, and choosing the important data, propose the guideline of problem solving to the audiences, plan and continue to upgrade. It enables students to actively contribute to the creativity, culture, wealth and well-being of themselves, their community and their nation. It teaches how to take risks and so become more resourceful, innovative, enterprising and capable. The course encourages the students to become innovative in technology design.

II. INDICATORS

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. SC4.1.1 Explain main principles of technology in daily life and analyze causes or factors affecting the change of technology.
4. SC4.1.2 Identify the problems or desires in daily life, collect and analyze data or concepts related to problems.
5. SC4.1.3 Design the solution of problem by analyzing, comparing, and choosing the important data, propose the guideline of problem solving to the audiences, plan and continue the problem solving.
6. SC4.1.4 Experiment, evaluate and identify the mistake, find the guideline to approve and propose the result of the solution.
7. SC4.1.5 Use the knowledge and skill about materials, equipment, tools, mechanisms, electricity or electronics to solve the problem properly and safely.

8. SC4.2.1 Design algorithm by using abstraction to solve the problem or explain work in daily life.
9. SC4.2.2 Design and programming basic program to solve the mathematical and scientific problem.
10. SC4.2.3 Collecting primary data, processing, evaluating, presenting the data and information according to objective, by using variety software or internet service.
11. SC4.2.4 Use the information technology safely, use the media and source of data according to requirement and agreement.

III. TENTATIVE COURSE

Week	Topic	Indicators	Period(s)
1	Introduction to Design Calculation and Technology	3	2
2	Introduction to Technology and its definition	3	2
3	Benefits of Technology	3	2
4	Career Technology	3	2
5	Technological Changes	3	2
6	Analysis of Technological Changes	3	2
7	Technological System <ul style="list-style-type: none"> • Intro to Programming (Cobol, Pascal and Arduino) 	3	2
8	Definition of System	3	2
9	Technological System	3	2
10	Technological System Analysis	3	2
	MIDTERM EXAMINATION		2
11	Materials and Basic Tools	3	2
12	Materials in Daily Life Basic Tools Measuring Tools Cutting Tools Adhesive Tools Drilling Tools	3	2
13.	Mechanism and Introduction to Electronics	3	2
14	<i>Basic Programming for Arduino Motor (Kidsbright Programming Language)</i>	3	2
15	Electricity and Basic Electronics	3	2
16	Engineering Design Procedure	3	2
17	The Steps of Engineering Procedure	3	2
18	Case Study of Engineering Design Procedure	3	2
19	Project Making	3	2
20	Project Presentation	3	2
	FINAL EXAMINATION		

Remarks: The course outline is subject to change as appropriate.

IV. Teaching Methods and Management

- Experiment Lecture/Discussion Group work
- Individual work Game Song
- Self-learning Demonstration Role play
- Project Experience ICT
- Local Wisdom based Others

V. Teaching Materials/ Supplements

- Handouts(soft copy) Worksheets(Softcopy) Teacher’s textbook
- Graphs/ Diagrams Maps Pictures
- Samples/ Models Exercises
- Commercial Text Book
- DVD/VCD
- Website
 - <https://design-technology.org/>
 - <http://www.design-technology.info/home.htm>
 - <https://www.schmalz.com/en/vacuum-knowledge/the-vacuum-system-and-its-components/system-design-calculation-example/>
 - <https://www.data.org.uk/campaigns/what-is-design-and-technology/>
 - <https://www.ucas.com/job-subjects/design-technology>
- Others

VI. ASSESSMENT AND EVALUATION

Indicator / Score from SGS	Formative I			Midterm	Formative II					Final
	1	2			10	11	12	13	14	
Total score	5	5		10	10	10	20	20	20	
1.Learners’ reading, analytical thinking					10					
2. Learners’ desirable characteristics						10				
3. SC4.1.1	5			10						
4. SC4.1.2		5								20
5. SC4.1.3							20			
6. SC4.1.4								20		
7. SC4.1.5									20	
Total	10			10	60					20

VII. ASSIGNMENT

SGS No.	Score (points)	Assignment	Deadline	Type			Remark
				Test	Individual	Group	
12	10	Individual Problem Presentation	3 rd week of May 2022		✓		
12	10	DCT Project Design Presentation	June (3 rd week) 2022			✓	
13	5	DCT System Flow	July 2022			✓	
MIDTERM	15	Midterm Test	August 2022	✓			
14	40	Final Output Design Technology Innovation (Working Model)	September 2022			✓	
FINAL	20	Final Test	Week 18	✓			
		Total					