Programming 1

Basic Course Information

Course Number	01005082	**Subject Category**	Compulsory(G)
Class Format	Lecture	**Credit Type and Number of Credits**	0.5
Department	Mechatronics	**Student Category**	Year 1
Period of Study	Semester 1	**Classes per Week**	1
Required Materials	Laptop, Coding program (PyCharm, VScode), Google Colab (Optional), Materials will be uploaded in Google Classroom.		
Instructor	Tanapon Keatsamarn	Teerapong Orachon	

Course Objective

Students can understand and explain introduction to computer programing by using Python language. Students can understand and explain the basic computer programming of python language such as, "Variables, expressions and statements", "Conditional execution", "Iteration", "Strings", "Lists", "Tuples", "Set", "Dictionaries", "Files", and "Functions" including its applications.

Evaluation(Rubric)	Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)
Can explain how to write basic programs by using Python.	Can explain how to write basic programs by using Python detailedly and precisely.	Can explain how to write basic programs by using Python.	Can't explain how to write basic programs by using Python.
Can implement basic programs by using Python.	Can implement basic programs by using Python detailedly and precisely.	Can implement basic programs by using Python.	Can't implement basic programs by using Python.
Can solve problems by using computer programs of Python.	Can solve problems by using computer programs of Python detailedly and precisely.	Can solve problems by using computer programs of Python.	Can't solve problems by using computer programs of Python.

Relationship with Learning Outcomes

C(1) Ability to operate and administer the computer software and hardware

C(2) Ability to understand the operating system and to develop software to solve specific problems.

Please change

Teaching Method

Outline:	Lecture and practice the basic computer programming such as, "Variables, expressions and statements", "Conditional execution", "Iteration", "Strings", "Lists", "Tuples", "Set", "Dictionaries", "Files", and "Functions"
Class Format:	Lecture, Practice and Homework Assignments
Please Note :	The Midterm report (Quiz score) and Final examination will be provided.

Course Plan

Semester 1	Contents and Method of Course	Goals	Related MCC		
1st week	Guidance: Basic statements of Python	Guidance: Basic statements of Python			
2nd week	Variables, expressions, operations and statements	Understanding Variables, expressions, operations and statements	V-A 7 157		
			V-A 7 158		
3rd week	Variables, expressions, operations and statements	Understanding Variables, expressions, operations and statements	V-A 7 159		
			V-A 7 160		
			V-A 7 161		
4th week	Conditional Execution and Flowchart	Understanding Conditional Execution and Flowchart	V-A 7 160		
5th week	Conditional Execution and Flowchart	Understanding Conditional Execution and Flowchart	V-A 7 160		
			V-A 7 162		
6th week	loop with while and for	Understanding loop with while and for	V-A 7 163		
7th week	loop with while and for	Understanding loop with while and for	V-A 7 163		
8th week	Review week 1st-7th class and Midterm report	Review week 1st-7th and Midterm report			
	Midterm Examination	No exam			
9h week	Midterm report feedback	Understanding mid-term report			
	Friday class 07/20/2023				
10th week	Text Strings	Understanding Text Strings	V-A 7 158		
11th week	List, and Tuples	Understanding List, and Tuples	V-A 7 164		
12th week	Dictionary	Understanding Dictionary			
13th week	Functions	Understanding Functions	V-A 7 156		
			V-A 7 161		
14th week	Functions	Understanding Functions	V-A 7 156		
			V-A 7 161		
15th week	Functions	Understanding Functions	V-A 7 156		
			V-A 7 161		
16th week	Preparing for final Examination	Preparing for final Examination			
	Final Examination	Final Examination			
	Final Examination	Final Examination			
17th week	Review and feedback final exam	Review and feedback final exam			

Do not

	Examination	Quiz	Mutual Evaluations between students	Report	Portfolio	Other
Basic Ability	0	0		40		
Technical Ability	30	30		0		
Interdisciplinary Ability	0	0		0		