Programming 4

Basic Course Information

Course Number	52005068	Subject Category	Compulsory (C)
Class Format	Lecture	Credit Type and Number of Credits	1
Department	Computer	Student Category	Year 2
Period of Study	Semester 2	Classes per Week	1
Required Materials			
Instructor	Krittanik Srithanasarn	Mio Kobayashi	Shashi Shah

Course Objective

The course provides that students will learn basic programming concepts and techniques. Students will use Python as their programming language. Students will learn how to use modules and classes in Python.

Evaluation(Rubric)

Evaluation(Rubric)	Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)
Understanding how to design object-oriented model and implements in Python	Demonstrates very good knowledge and understanding of how to design object-oriented	Demonstrates good knowledge and understanding of how to design object-oriented model and	Lacks knowledge and understanding of how to design object-oriented model and
Understanding how to use a module of OpenCV in python program to handle camera devices and apply the module to implement recognition system	Demonstrates very good knowledge and understanding of how to use a module of OpenCV in python program to handle camera devices and apply the module to implement recognition system	Demonstrates good knowledge and understanding of how to use a module of OpenCV in python program to handle camera devices and apply the module to implement recognition system	Lacks knowledge and understanding of how to use a module of OpenCV in python program to handle camera devices and apply the module to implement recognition system
Understanding how to use a module of Flask in python program to handle and deploy small web server	Demonstrates very good knowledge and understanding of how to use a module of Flask in python program to handle and deploy small web server	Demonstrates good knowledge and understanding of how to use a module of Flask in python program to handle	Lacks knowledge and understanding of how to use a module of Flask in python program to handle and deploy small web server
Understanding how to programming with sockets and principle of Client/Server	Demonstrates very good knowledge and understanding of how to programming with sockets.	Demonstrates good knowledge and understanding of how to programming with sockets.	Lacks knowledge and understanding of how to use a module of Flask in python program to programming with sockets.

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.

C(3) Ability to design, propose and implement IoT (Internet of Things) systems and solutions.

Teaching Method

Outline:	Lecture and practice, group discussion
Class Format:	Lecture, practice, quiz, and reports
Please Note :	

Course Plan

Semester 2	Contents and Method of Course	Goals	Related MCC		
week 1	Guidance: Introduction, Confirmation of laptop setting, Object-oriented Programming	Understanding Guidance: Introduction, Confirmation of laptop setting, Object-oriented Programming	V-O V-O	1 1	1 2
week 2	Object-oriented Programming (Concept)	Understanding Object-Oriented Programming	V-O V-O V-O V-O	1 1 1 1	1 2 3 4
week 3	Object-oriented Programming (Technique & its application)	Understanding Object-Oriented Programming and its application	V-O V-O V-O	1 1 1	14 15 16
week 4	Object-oriented Programming (Technique & its application)	Understanding Object-Oriented Programming	V-O V-O V-O	1 1 1	14 15 16
week 5	Guidance: Introduction, OpenCV	Understanding principle of OpenCV	V-O V-O V-O	1 1 1	1 3 4
week 6	OpenCV	Understanding OpenCV with simple implementation	V-O V-O V-O V-O	1 1 1 1	1 3 4 5
week 7	OpenCV	Understanding OpenCV	V-O V-O V-O V-O	1 1 1 1	1 3 4 5
week 8	Midterm Examination	Midterm Examination			
week 9	Midterm Examination	Midterm Examination			
week 10	Guidance: Introduction, Web App deployment (Flask)	Understanding the principle of Web Application	V-O V-O V-O	1 1 1	1 4 5
week 11	Web App deployment (Flask)	Understanding Web App deployment	V-O V-O V-O V-O	1 1 1 1	1 3 4 5
week 12	Guidance: Introduction, Programming with Sockets	Understanding Network Programming with Client & Server Applications	V-O V-O V-O V-O	1 1 1 1	1 3 4 5
week 13	Client and server Application	Understanding Network Programming with Client & Server Applications	V-O V-O V-O V-O	1 1 1 1	1 3 4 5
week 14	School Event	School Event			
week 15	Client and server Application	Understanding Network Programming with Client & Server Applications	V-O V-O V-O V-O	1 1 1 1	1 3 4 5
week 16	Small Project	Understanding Small Project	V-O V-O V-O V-O	1 1 1 1	14 15 16 17
week 17	Small Project	Understanding Small Project	V-O V-O V-O V-O	1 1 1 1	14 15 16 17
week 18	Review before final exam	Review before final exam			
week 19	Final Examination	all weeks			
week 20	Return Exam Papers and Feedback	Review and summarize learning			

Do not

	Midterm Report	Final Examination	Small Project/Report/Homework			
Basic Ability	15	15	5			
Technical Ability	20	20	15			
Interdisciplinary Ability	0	0	10			