Programming1

1. Course Description

By using the programming language Processing, we learn the basics of computer programming. Specifically, it is required for students understand what computer programming is, how to install the programming language Processing, how to use the Processing Development Environment (PDE), simple drawing programs, data structures, operators, the standard output, variables, loop structures, how to obtain mouse-data, selection structures, functions, and the basics of algorithms. In each lecture, the learners deepen their own understandings through writing/reading/tracing some codes in practice. At the end of each lecture, it is required for each student to verify what he or she understands in the lecture, to summarize topics in the lecture.
This class is related to DP1 and DP2.

2. Course Objectives

This course aims at mastering basic knowledge of computer programming, techniques and concepts which are required for practical computer programming. Specifically, it is required for students to understand and to utilize the followings at least; basic programming concepts, basic data types, variables, basic operators, control structures, and basics of functions. In addition, this course aims at having each student, who has the ability to write computer programs which utilize the topics described above.

3. Grading Policy

The learners must submit all exercises appointed in LMS. After all exercises are accepted, the learners can take an exam. The learners who can get over 60 points in the exam can get credits.
The learners can get feedback from the programs in which professors write comments.

4. Textbook and Reference

Textbook
Casey Reas and Ben Fry, Translator Takumi Funada, "Getting Started with Processing (2nd version)," O'Reilly Japan, 2016, ISBN978-4-87311-773-7.
Providing learning materials and streaming videos by LMS.

5. Requirements(Assignments)

Students need to study this subject using videos and the textbook for 1.5 hours before each class and solve the questions written in LMS for 1.5 hours after class.

6. Note

7. Schedule

[1]	What is computer programming
[2]	Installing Processing and how to use PDE (Processing Development Environment)
[3]	Simple drawing programs
[4]	Data structures, operators, the standard output, and variables
[5]	Loop structures using for statement
[6]	Selection structures
[7]	Comprehensive exercise 1
[8]	How to obtain mouse data
[9]	Loop and selection structures
[10]	Switch-case and multiloop
[11]	Loop structures using while statement, break statement, and continue statement
[12]	Function
[13]	Comprehensive exercise 2(1)
[14]	Comprehensive exercise 2(2)
[15]	Summarization and examination