Programming2

1. Course Description

By using the programming language Processing, we learn more advanced programming techniques and knowledge for development. This course is provided in the form of flipped classroom. Thus, students are basically required to watch video materials and to fill in a preparation worksheet before each lecture. In each lecture, students are required to confirm what they do and do not understand through their own preparation worksheets to 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, and summarize topics in the lecture.

This class is related to DP4C, DP4M and DP4E.

2. Course Objectives

This course aims at mastering basic knowledge, techniques and concepts which are required for program development. The concrete arrival target is as follows.
(1) Students can operate several datum using Array or Collection.
(2) Students can make a program to read and write in a file.
(3) Students can make an interactive program using GUI (Graphical User Interface) libraries.
(4) Students understand object oriented programming and can design a program in consideration.

3. Grading Policy

This course evaluates at the following rate: worksheets are 10%, subjects (including essential subjects and optional subjects) are 25%, a mid-term examination is 25% and a term-end examination is 40%. Learners who received evaluation over the total 60% will be passed this course.

4. Textbook and Reference

Textbook
Casey Reas, Ben Fry, 船田 巧(訳)
　Processingをはじめよう 第2版
　O'Reilly Japan,2016,
ISBN-13:978-4873117737

5. Requirements(Assignments)

Most of classes of this course are composed of flipped-learning classes. Learners have to learn by watching lecture videos before each class. And also, through filling a pre-class worksheet before the class, learners have to grasp whether they can comprehend the video contents or not. Learners must use 1.5 hours for these activities before each class. After the class, learners must use 1.5 hours for reflective learning using worksheets, working on subjects and so on.

6. Note

This course has systematic learning process. The content of each class consists of the contents of previous classes. Therefore, if you are absent from a class, it becomes difficult to understand the contents after that. If you are absent from a class, you should learn them by yourself using lecture videos and teaching materials. If you have any questions, please don't hesitate to ask instructors.

7. Schedule

[1]	Review of Programming 1
[2]	Classes and Objects
[3]	Programs using Classes
[4]	Arrays
[5]	Read and Write for a Text File
[6]	String Manipulation
[7]	Two-dimension Array
[8]	Mid-term Examination
[9]	Exercise 1
[10]	Collection Class (List)
[11]	Programming Using GUI Libraries
[12]	Object Oriented Programming
[13]	Inheritance
[14]	Exercise 2
[15]	Term End Examination, Summary