Programming2

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1. Course Description

The aim of the course is to understand about GUI, Arrays, List, Text File Input/Output and Basis of Object Oriented Programming, and to develop programs using them. And also, through the practice using Processing, we develop an understanding for design of information systems, techniques and so on. For the purpose, we learn the following items:

- Arrays, Multiple Arrays
- Input / Output for text files
- String Manipulation
- Collections (List)
- Basis of GUI Programming
- Basis of Object Oriented Programming

This course relates the diplomatic policy DP1 and DP2.

2. Course Objectives

Using Processing, learners will be able to:
- define original classes and develop programs.
- explain the concept of Arrays, and develop programs using them.
- develop programs which have input / output functions for text files.
- develop fundamental programs which have GUI components such as Button, Text Field and so on.
- explain the concept of Object Oriented Programming

3. Grading Policy

Learners have to get the acceptance of all assignments. This course evaluates at the following rate: reports are 25% and an examination 75%.

4. Textbook and Reference

Textbook
Casey Reas, Ben Fry, 船田 巧(訳)　Processingをはじめよう 第2版

(The Original: Casey Reas & Ben Fry,Make: Getting Started with Processing, 2nd Edition,
Maker Media, 2015, ISBN: 9781457187070)
　O'Reilly Japan, ISBN-13:978-4873117737

5. Requirements(Assignments)

Learners have to read contents and take self tests on LMS. And also, for developing understanding, it is effective to implement sample programs which are provided on LMS.

6. Note

Because there are many assignments, learners should to send reports systematically. Report deadlines are different on first half and second half of the term. Learners should take care the deadline of first half, because it is tended to be forgotten.

7. Schedule

[1]	Review the contents of Programming 1
[2]	Classes and Objects
[3]	Programs using Classes
[4]	Arrays
[5]	Input / Output for Text Files
[6]	String Manipulation
[7]	Multiple Arrays
[8]	Exercise 1
[9]	Collection Class (List)
[10]	Programs using GUI Libraries
[11]	Animation on a Program
[12]	Exercise 2
[13]	Basis of Object Oriented Programming
[14]	Inheritance
[15]	Exercise 3