SIT32004
ICT Application Development

Course Syllabus

Prof. Changbeom Choi

Basic Course Information

Course name	ICT Application Development		Course code		SIT32004	
Year	2019		Semester		1	
Department	School of Global Entrepreneurship & ICT		Categories		Selective	
Grade	Junior		Section		01	
Major	ICT Convergence, GE&ICT					
Course Credit Distribution	Total	Lecture	Experiment/ Practice	Design		Etc.()
	3	1	2	0		0

Method of Course	☑ Lecture ☐ Project ☐ Discussion ☐ Experiment ☑ Practice				
Prerequisite Courses	Compulsory course: Programming I		Parallel Courses	None	
Lecturer Name	Changbeom Choi	Lecturer Contact Number	1471		
Lecturer Email	cbchoi@handong.edu	Office Location	304		
TA Name	Jimin Jeong		TA E-mail	21600656@handong.edu	
Classroom Location	EBEN #101		Lecture Hours	Mon 5, 6	

Course Objectives

- Objective 1
  - To build the development capability using object-oriented programming language

- Objective 2
  - To help students to build their application by themselves

Desktop Application

Mobile Application

Network Application

Course Description (1/2)

- Class Operation
  - During the lecture, the instructor will give a lecture about the features of an application. Then, the instructor will give tasks to solve. After that, each student will solve the task. Mainly, students may discuss their code and develop their program during the course.

- Contents
  - The course covers such concepts as classes and objects, data abstraction/encapsulation, information hiding, and maintainability.

- Homework and Project
  - There will be two types of homework.
  - First, a student should complete given a program. (within 10 ~ 30 lines)
  - Second, a student will develop a program. (100 ~ 1000 lines or more)

- Preparation
  - This course adopts the flipped learning method. Therefore, the instructor may ask students to watch some lecture clips before the lecture. The lecture clip contains useful information to solve the task during the lecture.
    - » If the lecturer uses Flipped Learning Contents, there will be no class based on the school's policy
  - You may use your own laptop, however, using iMac is strongly recommended

This course does not teach students specific programming languages, such as Swift, or C#. **This course teaches how to build an application based on the modern application development methodology**, rather than teaching a programming language.

Evaluation

Attendance Management	- More than **three times** of absence will result in failure of this course. That is if you absent for **four times** you will get 'F' grade. - Twice of lateness will be counted by one absence - Any use of mobile phone or ringing in the class will be counted as single delay (first time) or absence (second time or later). - Any behavior disturbs in the class can be penalized. - Cheating attendance check is strictly prohibited. If any attempt of cheating is found, you will get F grade

Grading Policies and Rates(%) Total(100%)	Attendance	Midterm Exam	Final Exam	Quiz	Team Project	Homework	Etc.1	Etc.2
	5	0	10	15	35	35		

Honor Code	(Delay) Any submission later than its deadline will be penalized. - One day: 20% penalty - More than one day: rejection (Excuse) Excuse with the reasonable cause can be considered. - All reason should be submitted in signed written document not later than three days from the corresponding incident. (Dishonesty) Any dishonesty will result in failure (F). - Sharing any submission, including source codes, will be regarded as cheating. - Referencing any solution written by others, including the solution acquired from the internet, will be considered as cheating.

Course Schedule

Week	Date	Lecture Topics	
1	2019-02-25	* Introduction to ICT application development * Development environment introduction: git, * Python overview (1/2)	
2	2019-03-04	* Python overview (2/2)	
3	2019-03-11	Life Cycle of a Project	
4	2019-03-18	Project 01: Building a video player	
5	2019-03-25	Project 02: Utilizing open source	
6	2019-04-01	Project 03: Handling file i/o	
7	2019-04-08	Project 04: Handling network	
8	2019-04-15	Project proposal	
9	2019-04-22	Project 05: IoT programming (1/2)	
10	2019-04-29	Project 06: IoT programming (2/2)	
11	2019-05-06	Project 07: Handling AI speakers (1/2)	
12	2019-05-13	Project 08: Handling AI speakers (2/2)	
13	2019-05-20	Project 09: Machine Learning with your application (1/2)	
14	2019-05-27	Project 10: Machine Learning with your application (2/2)	
15	2019-06-03	Project Assessment	
16	2019-06-10	Wrap-up & Final exam	

- The course schedule may change when the instructor uses the Flipped Learning Materials
- If the lecturer uses the flipped learning materials, the students will invest more efforts in the learning time as a consequence. Therefore, the semester can be terminated early based on the school's policy
- The instructor may use Flipped Learning Materials based on the student's learning progress

- This course assumes that the students have finished the "Programming I" course (SIT22001). If a student did not complete the "Programming I" course, including exchange students, the student should pass the preliminary test to take this course.
  - Course Contents of Programming I
    » Fundamental Syntax of Python (iteration, conditionals, …)
    » Lists, Dictionary, Tuples, files
    » Big-O notation
    » Binary Search, Bubble Sort, Selection Sort
    » Divide and Conquers
    » Dynamic Programming (Finding Maximal Subsequence)
    » Object Oriented Programming
  - If you are not familiar with above topics, please take other courses to understand the concepts, such as Python Programming course at the GLS department or Java Programming at the EECS department

- Examination problem types
  - https://docs.google.com/document/d/1R_EFQfNwO2q9Nl1IZjjcE5RpzLEN1u8Yjj osf_FZeGY/edit?usp=sharing

- * This course adopts the absolute grading method, however, relative grading may be used for the final grading.
  - Only 1/3 of the total students will get A grade.
  - About 1/3 of attended students will get C grade.

  <u>* The contents and schedule of this syllabus can be modified with or without notice according to the performance of the students, university events or other reasons.</u>

- If you don't submit the pledge, your highest grade will be B+.

By signing below, I hereby acknowledge that I have completely read and fully understand the syllabus. Also, I will not make any claims, such as asking to change the grade, after the claim period for the final score.

Student ID: _____   Name: _____   Signature: _____