강의계획서(Syllabus)

[20 학년도 학기]

교과목 Course Name	컴퓨터 프로그래밍 (Python) Introduction to Programming: Python	과목번호 Course No.	CS 101
수강대상 Department	학과: Any major 학년: Anybody	학점/시수 Credit/Hours	학점: 3 credits 시수: 3 hours
강의시간 Class Times	월 요일 10:30 - 12 :00 수 요일 10:30 - 12 :00	강의실 Classroom	

담당교수 Instructor's Information	성명 Name	Mark Santolucito	e-mail	mark.santolucito@yale.edu
	연구실 Office Location	5th Floor in Library	Phone	(office) 041-731-3054 (mobile)
	면담시간 Office Hours	to be announced soon.		

1. 교과목 개요 (Course Description)

1. 강의개요 (Course Overview)[★200~300자]
This course gives an introduction to computer science and programming in Python. It will cover the basic language constructs and help guide students towards a more reasoned and logical way of thinking. Python, is an easy-to learn, high-level computer language that is used in modern computational settings.
2. 강의목표 (Course Objective)[★200~300자]
At the end of this course students will be able to write small programs to solve real world problems. Students will be able to read code from larger projects and understand the programmer's logic. Students will have the background in computation to continue taking courses in the computer science department. Any student completing this course will have the background to begin the computer science major.
3. 선수학습내용 (Prerequisites)
Lectures and code will be in English. Supplemental material in Korean is available. No prior programming experience necessary.

2. 교과 운영방식 (Course Format & Description)

1. 개요 (Course Format)

강의 Lecture	토론/토의 Discussion	글쓰기 Writing	발표 Presentation	실습 Practice	프로젝트 Project	기타 Others
30 %	20 %	10 %	10 %	20 %	20 %	0 %

2. 설명 (Course Description):[★200~300자]

The course will meet twice a week in a lecture style format. We will walk through the basics of the computational ideas in class. Students will be expected to complete the programming assignments as homework, and attend office hours as needed. Part of class time will be dedicated to working on coding homeworks.

Assignment are due one week after they are listed on the schedule. We will review the assignment requirements in class if needed.

3. 강의 교재 (Course Materials)

1. 부교재 (Supplementals)

https://www.codecademy.com/learn/python - Some of our work will be done on this site, in english.

https://www.codecademy.com/en/tracks/python-ko - If the english is challenging, this site has similar materials in korean that may be used as a supplement, but not a replacement.

http://goo.gl/7EAFy - Some work will also be drawn from MIT's open coursewear class on Python.

4. 수업 평가 (Course Evaluation)

1. 평가요소 (Grading Criteria)

출석 Attendance	평소 Assignments	중간고사 Mid-Term	기말고사 Final	기타(참여도) Others
10 %	40 %	20 %	30 %	0 %

Late assignments will not be accepted without prior permission.

주별 강의계획 (Course Schedule)

1주 Week 1	학습목표 Topics	Python Syntax
	학습내용 Objectives [★100~200자]	Intro to Python and computer science How does a program work
	과제 Assignments	Install Python locally, register for codecademy account and email Mark your username.
2주 Week 2	학습목표 Topics	Strings and Console Output
	학습내용 Objectives [★100~200자]	What is a String How does a program interact with the world
	과제 Assignments	Unit 1 HW Unit 2 HW
3주 Week 3	학습목표 Topics	Conditionals and Control Flow
	학습내용 Objectives [★100~200자]	Learn how to change program execution based on variables
	과제 Assignments	Unit 3 HW

4주 Week 4	학습목표 Topics	Loops
	학습내용 Objectives [★100~200자]	Learn how to make a program run forever Learn how to crash your computer
	과제 Assignments	Unit 4 HW
5주 Week 5	학습목표 Topics	Types
	학습내용 Objectives [★100~200자]	Reason about a program in an abstract way

	과제 Assignments	nims game
6주 Week 6	학습목표 Topics	Functions
	학습내용 Objectives [★100~200자]	Learn how avoid rewriting code
	과제 Assignments	Unit 5 HW
7주 Week 7	학습목표 Topics	Lists and Dictionaries
	학습내용 Objectives [★100~200자]	How do we store and retrieve large amounts of data
	과제 Assignments	Unit 6 HW

8주 Week 8	학습목표 Topics	Lists and Functions
	학습내용 Objectives [★100~200자]	Write reusable code to manipulate data
	과제 Assignments	Unit 7 HW
9주 Week 9	학습목표 Topics	More on Types
	학습내용 Objectives [★100~200자]	Reason about more advanced properties of a program
	과제 Assignments	IN CLASS MIDTERM : 1.5 hour written midterm, no computers!
10주 Week 10	학습목표 Topics	Libraries
	학습내용 Objectives [★100~200자]	Import and use code that other programmers have written
	과제 Assignments	Hangman
11주	학습목표 Topics	File Input/Output

Week 11	학습내용 Objectives [★100~200자]	Read and write to text files
	과제 Assignments	Unit 11 HW

12주 Week 12	학습목표 Topics	Text Analysis
	학습내용 Objectives [★100~200자]	Process large amounts of text and gain insight into the data
	과제 Assignments	Word frequencies in religious texts
13주 Week 13	학습목표 Topics	Graphics
	학습내용 Objectives [★100~200자]	
	과제 Assignments	
14주 Week 14	학습목표 Topics	Final Project
	학습내용 Objectives [★100~200자]	
	과제 Assignments	FINAL PROJECT: Sudoku Solver
15주 Week 15	보강 Makeup Class	
16주 Week 16	기말고사 Final Exam	IN CLASS EXAM : Written exam, no computers