Tamkang University Academic Year 113, 1st Semester Course Syllabus

Course Title	PYTHON PROGRAMMING AND APPLICATIONS	Instructor	DENG WEN-SHUENN
Course Class	TLBBM1A MASTER'S PROGRAM, DEPARTMENT OF BANKING AND FINANCE (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ General Course ◆ Selective ◆ One Semester ◆ 2 Credits
Relevance to SDGs	SDG8 Decent work and economic growth SDG10 Reducing inequalities		

Departmental Aim of Education

In full and advanced financial courses to cultivate the international professional financial talents with independent analysis, judgement, and problem solve abilities.

Subject Departmental core competences

A. Cultivate advanced knowledge of financial theory.(ratio:10.00)

B. Increase the skill of applied theory and practice.(ratio:20.00)

C. Increase the ability of logical deduction.(ratio:30.00)

D. Learning and use of financial research method.(ratio:20.00)

E. Increase the ability to pass the exam of advanced financial professional certificate. (ratio:10.00)

F. To have the potential of future advanced academic study.(ratio:10.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:5.00)
2. Information literacy. (ratio:30.00)
3. A vision for the future. (ratio:5.00)
4. Moral integrity. (ratio:10.00)
5. Independent thinking. (ratio:30.00)
6. A cheerful attitude and healthy lifestyle. (ratio:5.00)
7. A spirit of teamwork and dedication. (ratio:10.00)
8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	This course is intended to teach the basics of programming in Python. Python' s high level data structures and clear syntax make it an ideal first language, while the large number of existing libraries make it suitable to tackle almost any programming tasks.

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	To understand the basic syntax of PYTHON	Cognitive
2	To understand and become familiar with a number of simple data structures.	Cognitive
3	To learn how to build and package Python modules for reusability.	Cognitive
4	To familiarize student with data manipulation, scientific computing, and visualization using PYTHON.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEF	12345678	Lecture, Practicum	Testing, Study Assignments, Report(including oral and written)
2	ABCDEF	12345678	Lecture, Practicum	Testing, Study Assignments, Report(including oral and written)
3	ABCDEF	12345678	Lecture, Practicum	Testing, Study Assignments, Report(including oral and written)

4	ABCDEF	12345678	Lecture, Practicum	Testing, Study Assignments, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	113/09/09 ~ 113/09/15	Introduction--Basic principles of computers	
2	113/09/16 ~ 113/09/22	Introduction--I/O and file systems	
3	113/09/23 ~ 113/09/29	Introduction--I/O and file systems	
4	113/09/30 ~ 113/10/06	Data types and control structures	
5	113/10/07 ~ 113/10/13	Data types and control structures	
6	113/10/14 ~ 113/10/20	Functions	
7	113/10/21 ~ 113/10/27	Functions	
8	113/10/28 ~ 113/11/03	Functions	
9	113/11/04 ~ 113/11/10	Mid-term Exam	
10	113/11/11 ~ 113/11/17	Using modules and packages	
11	113/11/18 ~ 113/11/24	Using modules and packages	
12	113/11/25 ~ 113/12/01	Using modules and packages	
13	113/12/02 ~ 113/12/08	Scipy and Numpy	
14	113/12/09 ~ 113/12/15	Scipy and Numpy	
15	113/12/16 ~ 113/12/22	Web crawling in Python	
16	113/12/23 ~ 113/12/29	Web crawling in Python	
17	113/12/30 ~ 114/01/05	Final Exam	
18	114/01/06 ~ 114/01/12	Flex week, learning activities should be arranged.	

Key capabilities	self-directed learning Information Technology Problem solving Interdisciplinary

Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist) Competency-based education 'competency exploration' sustained competency or global issues STEEP (Society, Technology, Economy, Environment, and Politics) In addition to teaching content of the teacher's professional field, integrate other subjects or invite experts and scholars in other fields to share knowledge or teaching
Distinctive teaching	Project implementation course Learning technologies (such as AR/VR,etc.) incorporated to physical courses
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) Logical Thinking AI application
Requirement	
Textbooks and Teaching Materials	Self-made teaching materials:Textbooks Name of teaching materials: Starting Out with Python, 5th edition Tony Gaddis, Pearson
References	
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：30.0 % ◆ Midterm Exam： % ◆ Final Exam： 30.0 % ◆ Other〈Term project〉：30.0 %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . **※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**