Tamkang University Academic Year 112, 2nd Semester Course Syllabus

Course Title	OBJECT ORIENTED PROGRAMMING	Instructor	CHEN, CHIA-JEN
Course Class	TEIDB1B DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 1B	Details	◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		

Departmental Aim of Education

Ⅰ. Comprehend professional knowledge.

Ⅱ. Acquire mastery of Practical Skills.

Ⅲ. Establish creative achievement.

Subject Departmental core competences

A. Programming and application ability.(ratio:40.00)

B. Mathematical reasoning ability.(ratio:15.00)

C. Implementing computer systems ability.(ratio:15.00)

D. Computer networking application skills.(ratio:15.00)

E. Professional skills for information technology (IT) industry.(ratio:15.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:5.00)

2. Information literacy. (ratio:30.00)

3. A vision for the future. (ratio:10.00)

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:5.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	Fundamentals of object-oriented programming. Sufficient knowledge to leverage and maneuver C++ as one of the primary tools for students to complete other related core courses. Enhance students' English Comprehension.

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 build and develop students' fundamental skills and knowledge in C++ and object-oriented programming.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDE	12345678	Lecture	Testing, Study Assignments, Discussion(including classroom and online), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	113/02/19 ~ 113/02/25	1.Introduction of instructor and students. 2.Syllabus debriefing. 3.Debrief scoring. 4.Module 1: Namingspace Comment Variables	
2	113/02/26 ~ 113/03/03	Module 1: Constant Output Input Generate randome numbers	
3	113/03/04 ~ 113/03/10	Decision Making: if...then...else... Switch Ternary operator	

4	113/03/11 ~ 113/03/17	Loops: for while do...while Nested loop	
5	113/03/18 ~ 113/03/24	Static Array	
6	113/03/25 ~ 113/03/31	Dynamic Array	
7	113/04/01 ~ 113/04/07	Spring break	
8	113/04/08 ~ 113/04/14	Pointer I	
9	113/04/15 ~ 113/04/21	Midterm Exam Week	
10	113/04/22 ~ 113/04/28	Pointer II	
11	113/04/29 ~ 113/05/05	Function: Pass by value Pass by reference Pass by pointer	
12	113/05/06 ~ 113/05/12	Object Oriented Programming: What's an object? What's a class? Abstraction	
13	113/05/13 ~ 113/05/19	Encapsulation	
14	113/05/20 ~ 113/05/26	Inheritance	
15	113/05/27 ~ 113/06/02	Polymorphism	
16	113/06/03 ~ 113/06/09	Constructor and Destructor	
17	113/06/10 ~ 113/06/16	Final Exam Week (Date:113/6/11-113/6/17)	
18	113/06/17 ~ 113/06/23	Flex week, learning activities should be arranged.	

Key capabilities	self-directed learning Information Technology Social Participation Problem solving
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)
Distinctive teaching	Game-based learning courses Project implementation course
Course Content	Computer programming or Computer language (students have hands-on experience in related projects)

Requirement	
Textbooks and Teaching Materials	Self-made teaching materials:Presentations, Sample programs
References	
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：20.0 % ◆ Midterm Exam： 20.0 % ◆ Final Exam： 20.0 % ◆ Other〈Assignments〉：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.**