

Tamkang University Academic Year 104, 2nd Semester Course Syllabus

Course Title	OBJECT ORIENTED PROGRAMMING	Instructor	FENG-CHENG CHANG
Course Class	TQICB1A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY (ENGLISH TAUGHT PROGRAM), 1A	Details	<ul style="list-style-type: none"> ◆ Required ◆ One Semester ◆ 3 Credits
Departmental Aim of Education			
Cultivate professional talents in developing and applying information system in various fields.			
Departmental core competences			
<ul style="list-style-type: none"> A. Capability of computer program coding, process planning, and problem solving B. Capability of applying basic mathematics and information technology related mathematics C. Capability of applying knowledge of internet structure and protocol in communication system D. Capability of developing information system E. Capability of integrating information system 			
Course Introduction	<p>C++ is a popular object-oriented programming language for large-scale software development. It is flexible in that both high-level and low-level syntax features are supported. We will learn C++ by various kinds of examples, and focus on solving practical problems in the OO approaches.</p>		

The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

I. Objective Levels (select applicable ones) :

- (i) Cognitive Domain : C1-Remembering, C2-Understanding, C3-Applying,
C4-Analyzing, C5-Evaluating, C6-Creating
- (ii) Psychomotor Domain : P1-Imitation, P2-Mechanism, P3-Independent Operation,
P4-Linked Operation, P5-Automation, P6-Origination
- (iii) Affective Domain : A1-Receiving, A2-Responding, A3-Valuing,
A4-Organizing, A5-Characterizing, A6-Implementing

II. The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :

- (i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.
- (ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3, C5, and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)
- (iii) Determine the Departmental core competences that correspond to each teaching objective. Each objective may correspond to one or more Departmental core competences at a time. (For example, if one objective corresponds to three Departmental core competences: A, AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Departmental core competences
1	C++ syntax	C1	A
2	C++ programming	P4	A
3	Object-Oriented Concepts	C6	A

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	C++ syntax	Lecture	Written test
2	C++ programming	Lecture, Practicum	Written test, Practicum
3	Object-Oriented Concepts	Lecture, Practicum	Written test, Practicum

This course has been designed to cultivate the following essential qualities in TKU students

Essential Qualities of TKU Students	Description
◇ A global perspective	Helping students develop a broader perspective from which to understand international affairs and global development.
◆ Information literacy	Becoming adept at using information technology and learning the proper way to process information.
◇ A vision for the future	Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision.
◇ Moral integrity	Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems.
◇ Independent thinking	Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically.
◇ A cheerful attitude and healthy lifestyle	Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life.
◇ A spirit of teamwork and dedication	Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems.
◇ A sense of aesthetic appreciation	Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process.

Course Schedule

Week	Date	Subject/Topics	Note
1	105/02/15 ~ 105/02/21	Review of Procedural approach and C language (Fundamental)	
2	105/02/22 ~ 105/02/28	Review of Procedural approach and C language (Advanced)	
3	105/02/29 ~ 105/03/06	Review of Procedural approach and C language (Advanced)	
4	105/03/07 ~ 105/03/13	C++ Basics	
5	105/03/14 ~ 105/03/20	Flow of Control / Procedures and Functions	
6	105/03/21 ~ 105/03/27	I/O Streams	
7	105/03/28 ~ 105/04/03	Arrays	
8	105/04/04 ~ 105/04/10	Strings and Vectors	
9	105/04/11 ~ 105/04/17	Pointers	
10	105/04/18 ~ 105/04/24	Midterm Exam Week	
11	105/04/25 ~ 105/05/01	Defining Classes	

12	105/05/02 ~ 105/05/08	Separate Compilation and Namespaces	
13	105/05/09 ~ 105/05/15	Pointers and Linked List	
14	105/05/16 ~ 105/05/22	Recursion	
15	105/05/23 ~ 105/05/29	Inheritance	
16	105/05/30 ~ 105/06/05	Object-oriented Analysis/Design	
17	105/06/06 ~ 105/06/12	C++ Templates	
18	105/06/13 ~ 105/06/19	Final Exam Week	
Requirement	<p>(1) There is no make-up quiz and assignment if you miss the deadline without a reason. (2) If the periods are the campus-wide roll-calling periods, you will be excluded from the course when the "absence hours" reaches 18. (Article 38.2 of TKU Study Regulations) (2.1) Please note that the "exclusion from the course" is not part of the evaluation of your learning outcome. We consider the "participation" or the "contribution" in the evaluation. However, the administrative team enforces that the campus rule overrides the course evaluation method. The staff will submit the exclusion list on behalf of the teacher when you violate the regulation.</p>		
Teaching Facility	Computer, Projector		
Textbook(s)	W. Savitch, Problem Solving with C++, 8th ed., Addison Wesley. K. N. King, C Programming - A Modern Approach, 2nd ed., W. W. Norton & Company, Inc.		
Reference(s)	W. Savitch, Absolute C++ 4th ed., Pearson International Edition, Addison Wesley, 2010.		
Number of Assignment(s)	6 (Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : % ◆ Mark of Usual : 10.0 % ◆ Midterm Exam : 20.0 % ◆ Final Exam : 20.0 % ◆ Other (Lab) : 50.0 %		
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.		