朝陽科技大學 091學年度第1學期教學大綱
Structured Programming 結構化程式設計

當期課號	6074	Course Number	6074
授課教師	李金鳳	Instructor	LEE,CHIN FENG
中文課名	結構化程式設計	Course Name	Structured Programming
開課單位	資訊管理系(二進)三B	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	結構化程式設計以循序、選擇、與反複三種基本結構設計程式設計，爲一良好初學程式者學習的典範。C++程式語言爲本課程學習結構化程式設計所用的工具，將介紹C++程式語言之語法與範例，以使學習者可以依既定規格完成程式設計。	Objectives	Structured Programming utilizes sequential, selective, and repetitive structures to design programs. It is a good methodology for beginners to learn how to design programs. C++ is the programming tool in this course to learn structured programming. The course will introduce the principals and fundamentals of generic programming in C++, such that the students can write programs according to the specification.
教材		Teaching Materials	
成績評量方式		Grading	
教師網頁			
			九十一年度上學期 課程大綱(Syllabus) Course Title: Structured Programming in C/C++ (結構化程式設計—C/C++語言) Instructor : 李金鳳 Office : T2-944 Telephone : (04)23323000 ext. 4293 Email: lcf@mail.cyut.edu.tw Homepage : http://www.cyut.edu.tw/~lcf Lab Schedule/ Room: 二技三B : Wednesday 9:10~1200am (第2~4節) (G509) & 進二技三B: Tuesday 6:25~9:05pm (第A~C節) (G609) Office Hour: Monday : 1:30~3:20pm (第4~5節) Tuesday: 10:10~12:00am (第3, 4節) Textbook and Reference Books (上課教材)： 1．C 語言詳論，3rd edition, (原著J. R. Hanly, E. B. Koffman and J. C. Horvath, "Problem Solving and Program Design in C",) 蔡明志譯 ，東華書局(可洽 台中東華書局分部 陳經理)。 **此中文書現資管四技二A班同學或四技三A,B班同學應有買，但其原文書已有作部份修改，老師大都會以中文書爲教材** 2 . C++ How to Program , 3rd edition(可洽 台中全華書局轄區專員 張禎容小姐，04-22618485)。 另外: 坊間書局、圖書館或網站上都有很多參考書或參考資料，同學可多加利用。 3. Visual C++ 6 Bible --基礎與程式架構篇， Richard Cl Leinecker, et. al.原著，李奇編譯，文魁資訊(可洽 台中專員 徐志欽先生，: (04) 23257900

教學內容		**Syllabus**	轉222)。 Course Objective (教學目標)：使學生學會 C/C++程式語言，進而利用C/C+程式語言來幫助解決問題。 Course Topics (主要內容)： 包括選取結構、迴圈、陣列、函數、子程式、字串、結構、檔案的使用及模組化設計的方法及遞迴、動態資料結構的使用。 Lecture Methods (教學方法)： 正課講授與上機實習相互配合，實習課包含兩部份，以小程式(Exercise)來應證上課的內容及熟悉指令及結構，以大程式(Project)來結合各種程式技巧及學習利用C/C++程式語言來幫助解決問題。 Grading Policy : □ Midterm & Final exam. : 25%; □ Assignments, tests, two projects and class behaviors : 75%; □ Bonus : 課堂之參與度高&&優異表現者另有獎勵分數. Remarks : □ 每次上課請自備3 1/2磁片，磁片上應有封面並有註有學號及姓名，以便上實習及上機考試時使用。 □ 作業請於指定日前完成繳交，不管是「程式」或「紙本作業」上有遲交者，從當日起算，每日扣成績之20分，直到零分爲止。 □ 未能出席者請事先以email或同學帶口訊說明缺席之原因並依照學校請假準則辦理，否則以曠課論，並在class behavior上扣部份總分。 □ 作業及考試有不誠實或投機之行爲者，依校規定辦理且初犯者當次成績爲零分，再犯者以學期總成績零分計。 Table of Contents (講義目錄) Overview of Computers and Programming. Electronic Computers Then and Now. Introduction to Computer Hardware. Computer Software. The Software Development Method. Applying the Software Development Method. Case Study: Converting Miles to Kilometers. Overview of C. C Language Elements. Variable Declarations and Data Types. Executable Statements. General Form of a C Program. Arithmetic Expressions. Case Study: Evaluating a Collection of Coins. Formatting Numbers in Program Output. Interactive Mode, Batch Mode, and Data Files. Common Programming Errors. Top-Down Design with Functions. Building Programs from Existing

			Information. Case Study: Finding the Area and Circumference of a Circle. Case Study: Computing the Weight of a Batch of Flat Washers. Library Functions. Top-Down Design and Structure Charts. Case Study: Drawing Simple Diagrams. Functions without Arguments. Functions with Input Arguments. Common Programming Errors. Selection Structures: If and Switch Statements. Control Structures. Conditions. The if Statement. If Statements with Compound Statements. Decision Steps in Algorithms. Case Study: Water Bill Problem. More Problem Solving. Case Study: Water Bill with Conservation Requirements. Nested if Statements and Multiple-Alternative Decisions. The switch Statement. Common Programming Errors. Repetition and Loop Statements. Repetition in Programs. The while Statement. Computing a Sum or Product in a Loop. Counting Loops and the for Statement. Conditional Loops. Loop Design. Nested Loops. The do-while Statement and Flag-Controlled Loops. Problem Solving Illustrated. Case Study: Computing Radiation Levels. How to Debug and Test Programs. Common Programming Errors. Modular Programming. Functions with Simple Output Parameters. Multiple C

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