

Academic Org: Dept of Computer Sci & Engg – Subject: Computer Science

**Course:** CSCI1020      **Course ID:** 002554      **Eff Date:** 2022-07-01      **Crse Status:** Active      **Apprv. Status:** Approved      **【Course Rev】**  
Hands-on Introduction to C++ 高級程序設計語言C++實用介紹

This course aims to provide an intensive hands-on introduction to the C++ programming language. Topics include the basic C++ language syntax, variable declaration, basic operators, program flow and control, defining and using functions, file and operating system interface. Specific key features of the C++ programming language such as object-oriented methodology, class templates, encapsulation, inheritance, polymorphism, etc. will be highlighted.

本科旨在密集介紹階程序設計語言C++。包括基本階程序設計語言C++的語法、變數申明、基本運算符、程序編寫流程及控制、函數定義及應用、文件及操作系統接口。科目亦會介紹階程序設計語言C++的特性，例如面向對象的方法、類別模板、及其概念如封裝、繼承、多態性等。

**Grade Descriptor:**      A

EXCELLENT – exceptionally good performance and far exceeding expectation in all or most of the course learning outcomes; demonstration of superior understanding of the subject matter, the ability to analyze problems and apply extensive knowledge, and skillful use of concepts and materials to derive proper solutions.

有關等級說明的資料，請參閱英文版本。

B

GOOD – good performance in all course learning outcomes and exceeding expectation in some of them; demonstration of good understanding of the subject matter and the ability to use proper concepts and materials to solve most of the problems encountered.

有關等級說明的資料，請參閱英文版本。

C

FAIR – adequate performance and meeting expectation in all course learning outcomes; demonstration of adequate understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

D

MARGINAL – performance barely meets the expectation in the essential course learning outcomes; demonstration of partial understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

F

FAILURE – performance does not meet the expectation in the essential course learning outcomes; demonstration of serious deficiencies and the need to retake the course.

有關等級說明的資料，請參閱英文版本。

**Equivalent Offering:**

**Units:** 1 (Min) / 1 (Max) / 1 (Acad Progress)

**Grading Basis:** Graded

**Repeat for Credit:** N

**Multiple Enroll:** N

**Course Attributes:**

**Topics:**

### COURSE OUTCOMES

**Learning Outcomes:**

1. Be able to write, compile and execute Standard C++ programs
2. Be able to make use of C++'s object-oriented methodology
3. Be able to develop object-oriented program using classes, inheritance, encapsulation, and polymorphism

**Course Syllabus:**

This course aims to provide an intensive hands-on introduction to the C++ programming language. Topics include the basic C++ language syntax, variable declaration, basic operators, program flow and control, defining and using functions, file and operating system interface. Specific key features of the C++ programming language such as object-oriented methodology, class templates, encapsulation, inheritance, polymorphism, etc. will be highlighted.

**Assessment Type:**

Others : 50%  
Short answer test or exam : 50%

**Feedback for Evaluation:**

1. Course evaluation and questionnaire
2. Results of assignments and examination
3. Question-and-Answer sessions during class
4. Student consultation during office hours or online

**Required Readings:**

-

**Recommended Readings:**

1. Problem Solving with C++ (6th edition), Walter Savitch, Addison-Wesley, 2006
2. The C++ Programming Language (3rd Edition), Bjarne Stroustrup, Addison-Wesley
3. C++ Primer Plus (5th Edition), Stephen Prata, Sams

**OFFERINGS**

1. CSCI1020 Acad Organization=CSD; Acad Career=UG

**COMPONENTS**

LAB : Size=30; Final Exam=N; Contact=2  
LEC : Size=30; Final Exam=Y; Contact=1

**ENROLLMENT REQUIREMENTS**

1. CSCI1020 **Enrollment Requirement Group:**  
Not for students who have taken CSCI1120 or 1520 or 1540 or ESTR1100.

**New Enrollment Requirement(s):**  
Exclusion = no change

**CAF**

eLearning hrs for blended cls 0  
No. of micro-modules 0  
Research components (UG) 0%

---

---

**< E N D O F R E P O R T >**