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THE CHINESE UNIVERSITY OF HONG KONG
Print Course Catalog Details

May 10, 2023
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 Academic Org: Fac Office of Engineering – Subject: Courses offered by Fac of Erg

Course: ENGG1110 **Course ID:** 010217 **Eff Date:** 2022-07-01 **Crse Status: Active** **Apprv. Status:** Approved **[**Course Rev**]**

Problem Solving By Programming 程式設計與解難

This is a computer-programming course to equip students with software knowledge and skills to solve engineering problems. Students will learn fundamental programming concepts in C, such as data representation and variables, operators and expressions, flow-control statements, functions, arrays, structures, pointer basics, input/ output handling, etc. In addition to lectures and e-learning, students will work in labs to practise solving problems and complete an engineering software project. The course will cover various problem solving methods such as incremental development, divide-and-conquer, debugging technique, finite-state machine, etc. Through practices, students will acquire skills to define problems and specifications, to perform modelling and simulation, to develop software system prototypes, to carry out verification, validation, and performance analysis.

本科爲計算機編程課程，爲學生提供解決工程問題的軟件知識和技能。學生將學習C語言中的基本編程概念，例如數據表示和變量，運算符和表達式，流程控制語句，函式，數組，結構，指針基礎知識，輸入/輸出處理等。除了講課和線上學習，學生將在計算實驗室實習解決問題，並完成一工程軟件項目。此科將涵蓋各種問題解決方法，如增量開發，分而治之，調試技術，有限狀態機等。通過實踐，學生將獲得多種技能，包括：議題及草擬規格、進行建模和模擬、開發軟件系統原型、進行核實、驗證和性能分析。

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: 3 (Min) / 3 (Max) / 3 (Acad Progress)
Grading Basis: Graded
Repeat for Credit: N
Multiple Enroll: N
Course Attributes: Faculty Package Course: Engineering

Topics:

COURSE OUTCOMES

Learning Outcomes:

At the end of the course of studies, students are expected to acquire the ability to
1. understand basic structural programming constructs in building a working software;
2. apply computer programming to solve engineering problems;
3. model a system on a computer to meet specifications and performance goals.

Course Syllabus:

According to the course teacher in the respective teaching term.

Assessment Type:

Essay test or exam	: 40%
Lab reports	: 30%
Project	: 20%
Short answer test or exam	: 10%

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Feedback for Evaluation:

Feedback will be collected via:
1. Assessments in lab exercises, project, midterm and exam
2. Question-and-answer sessions during class and labs
3. Student consultation during office hours and through online channels
4. Blackboard course website and forum
5. Course evaluation and questionnaire

Required Readings:

To be provided by course teachers

Recommended Readings:

1. C How to Program, Deitel & Deitel, 8th ed.
2. Other references provided by the instructor.

OFFERINGS

1. ENGG1110   Acad Organization=ENO; Acad Career=UG

COMPONENTS

LAB : Size=120; Final Exam=N; Contact=1
LEC : Size=120; Final Exam=Y; Contact=3

ENROLMENT REQUIREMENTS

1. ENGG1110   **Enrollment Requirement Group:**
Not for students who have taken CSCI1020 or 1030 or 1110 or 1120 or 1130 or 1510 or 1520 or 1530 or 1540 or ESTR1002 or 1100 or 1102.

CAF

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

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