

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

Course: CSCI2510 **Course ID:** 002577 **Eff Date:** 2022-07-01 **Crse Status:** Active **Apprv. Status:** Approved **【Course Rev】**
Computer Organization 計算機結構

This course is designed to provide the basic knowledge of computer organization and assembly language programming. Functions and structures of the basic building blocks: CPU, memory unit and input/output units will be introduced. Assembly language programming is used as a tool to study the internal coding of information, number representation, arithmetic operations and the flow of information within a microcomputer.

本科旨在提供計算機結構及匯編語言程序設計的基本知識。介紹基本構件的功能及結構：中央處理器、存儲器及輸入輸出部件。以匯編語言程序設計為工具來研究信息的內部編碼、數字表示法、算術運算及微計算機中的信息流。

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:

Topics:

COURSE OUTCOMES

Learning Outcomes:

1. Understand the principles of computer architectures including I/O, memory organization and the processor
2. Be able to write assembly language programs
3. Be able to select the best I/O scheme (polling, interrupt or DMA) for a given problem

Course Syllabus:

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Assessment Type:

Others : 40%
Short answer test or exam : 60%

Feedback for Evaluation:

1. Midterm evaluation
2. Questions in labs/tutorials

Required Readings:

1. Hamacher, Vranesic, Zaky, Computer Organization (5th ed.), McGraw Hill, 2002

Recommended Readings:

OFFERINGS

1. CSCI2510 Acad Organization=CSD; Acad Career=UG

COMPONENTS

LEC : Size=30; Final Exam=Y; Contact=3
TUT : Size=30; Final Exam=N; Contact=1

ENROLMENT REQUIREMENTS

1. CSCI2510

Enrollment Requirement Group:

Not for students who have taken CENG2400 or ELEG3230 or ENGG2020 or ESTR2100 or ESTR2104.
Prerequisite: CSCI1110 or 1120 or 1130 or 1510 or 1520 or 1530 or 1540 or ENGG1110 or ESTR1002 or 1100 or 1102 or (MATH2210 and MATH2220) or PHYS2351.

New Enrollment Requirement(s):

Pre-requisite = no change
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 >