CU_CURR501
Page 1 of 4

THE CHINESE UNIVERSITY OF HONG KONG
Print Course Catalog Details

May 10, 2023
14:18:36 PM

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

Course: CSCI3170   **Course ID:** 002589   **Eff Date:** 2022-07-01   **Crse Status: Active**   **Apprv. Status:** Approved   【Course Rev】

Introduction to Database Systems 數據庫系統導論

This course introduces the concepts and principles of database management systems. Subjects include: basic concepts, system structures, data models, database languages (SQL in particular), relational database normalization, file systems, indexing, query processing, concurrency control and recovery schemes.

本科介紹數據庫管理系統的概念及原理。主題包括：基本概念、系統結構、數據模型、數據庫語言（尤其 SQL）、相關數據庫的規範化、文件系統、索引、詢問處理、並行控制及復原方案。

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

CU_CURR501
Page 2 of 4

THE CHINESE UNIVERSITY OF HONG KONG
Print Course Catalog Details

May 10, 2023
14:18:36 PM

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:

The students will be able to
1. use an E-R diagram to model a database;
2. translate an E-R diagram into a relational model;
3. fine tune a relational schema based on the principles of relational database normalization;
4. implement queries by using database languages (SQL in particular);
5. understand file organizations and index structures of a DBMS;
6. understand the ideas of query processing and query optimization;
7. understand the principles of concurrency control and recovery schemes;

Course Syllabus:

This course introduces the concepts and principles of database management systems. Subjects include: basic concepts, system structures, data models, database languages (SQL in particular), relational database normalization, file systems, indexing, query processing, concurrency control and recovery schemes.

CU_CURR501
Page 3 of 4

THE CHINESE UNIVERSITY OF HONG KONG
Print Course Catalog Details

May 10, 2023
14:18:36 PM

Assessment Type:

Essay test or exam : 70%
Others : 30%

Feedback for Evaluation:

1. Course evaluation questionaire;
2. Results of assignments;
3. Results of exams;

Required Readings:

1. Database Management Systems, by Raghu Ramakrishnan, Johannes Gehrke, McGraw Hill (3rd edition), 2003
2. Database System Concepts, Abraham Silberschatz, Henry F. Korth, S. Sudarshan. , McGraw-Hill, 2002.
3. Concurrency Control and Recovery in Database Systems, P.A. Bernstein and V. Hadzilacos and N. Goodman, Addison Wesley, Reading, Massachusetts, 1987.

Recommended Readings:

OFFERINGS
1. CSCI3170   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. CSCI3170

Enrollment Requirement Group:
Prerequisite: CSCI2100 or 2520 or ESTR2102.
For 2nd-year entrants, the prerequisite will be waived.

New Enrollment Requirement(s):
Pre-requisite = 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 >