THE UNIVERSITY OF HONG KONG
FACULTY OF BUSINESS AND ECONOMICS

School of Business
IIMT3601 Database Management
Semester 2, 2016-2017

I. Information on Instructor, Tutor, and Course

Instructor: Michael Chau, Ph.D.
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URL: http://www.business.hku.hk/~mchau/
Consultation time: by appointment

Lecture hours: Thursday 1:30pm-4:20pm
Class Venue: KK202
Tutor: Mr. Ian Chan (ichanhku@gmail.com)
Tutorial Venue: KK610

Course Website: Class readings, assignments and other related materials will be provided on the course site on Moodle (http://moodle.hku.hk/). Please visit this site frequently.

Pre-requisite: BUSI1003 Introduction to Management Information Systems / IIMT2601 Management Information Systems
Remarks: Students taking or having taken CSIS0278 / COMP3278 are not allowed to take this course.

Required Text:
Modern database management (*Seventh, Eighth, Ninth, Tenth, or Eleventh Edition*)
by Jeffrey A. Hoffer, Mary Prescott, Fred McFadden

II. Course Description and Objectives

This course studies the principles of design, development and administration of database management systems for business applications. Emphasis will be placed on the user, developer, and administrator points of view.

Course objectives

1. Provide students with the opportunity to learn the basic concepts of database development and management.
2. Provide students with hands-on experience in designing, developing, and maintaining database systems.
3. Help students understand the role of database in various types of information systems and its importance in real world applications.

III. Learning Outcomes

After taking this course, students should be able to:

1. Define and explain the characteristics, advantages and disadvantages of databases.
2. Describe the importance of data modeling concepts and use these effectively.
3. Describe the tools that comprise a modern database management system like Access and MySQL.
4. Plan and design a database.
5. Write queries using the Structured Query Language (SQL).
6. Work on database projects as a team player.

IV. Alignment of Program and Course Outcomes

Program Learning Outcome	Course Learning Outcome
1. Acquisition and internalization of knowledge of business and information systems	1,2,3,4,5
2. Application and integration of knowledge of business and information systems	4,5,6
3. Inculcating professionalism and instilling leadership skills	6
5. Mastering communication skills	2,4,6

V. Teaching and Learning Activities

Teaching and learning activities for this course include:

1. Interactive lectures
   - Lectures: basic concepts and knowledge will be presented in-class through powerpoint-slides.
   - In-class exercises: basic concepts and techniques are illustrated using examples. Students work along with the lecturer to solve the problems. These exercises help students follow the lectures closely and actively.
   - Demonstration: live demonstrations of software and technologies will be given in class to show students how they work.
   - In-class discussions: sometimes discussion questions are raised by the lecturer. Students are encouraged to participate in discussions and share opinions with their peers. These discussions encourage students to think more for certain arguable topics.
2. Tutorial and online discussions
   - Tutorial lab sessions: students practice concepts learned in class in the computer lab and work on examples with the tutor.
   - Online discussions: students express and share their ideas and questions online. These discussions encourage students to think about the class materials after class.
3. Assignments and group project
   - Assignments: students accomplish tasks using technologies covered in class. Through the assignments they can acquire hands-on experience using these technologies.
   - Project: students apply the knowledge learned in-class in a group project in hypothetical or real business situations.
4. Written examinations
   - Mid-term exams will test students' knowledge of the topics covered in class and their application of the knowledge.

Course Teaching and Learning Activities	Expected Hours	Study Load (% of study)
T&L1. Interactive lectures	36	30.0%
T&L2. Tutorials and online discussions	12	10.0%
T&L3. Assignments and group activities	36	30.0%
T&L4. Self-study and written exam	36	30.0%
Total	120	100%

VI. Assessment

Learning outcome	Teaching and learning activity	Assessment
1. Define and explain the characteristics, advantages and disadvantages of databases.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exams
2. Describe the importance of data modeling concepts and use these effectively.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, project, exams
3. Describe the tools that comprise a modern database management system like Access and MySQL.	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, exams
4. Plan and design a database.	Lectures, in-class exercises, tutorials, in-class discussions, online discussions, exams	Participation in discussions, assignments, project, exams
5. Write queries using the Structured Query Language (SQL).	Lectures, demonstration, in-class exercises, tutorials, in-class discussions, online discussions, assignments, exams	Participation in discussions, assignments, project, exams
6. Work on database projects as a team player.	Tutorials, online discussions	Participation in discussions, project

VII. Standards for assessment

Assignments (20%)

Two individual assignments will be given. Students will have approximately two weeks to complete each assignment. Make sure to work on the assignments individually and do not share with others. Please be prompt in submitting assignments. If a submission is late for 24 hours or less, 40% will be deducted. If a submission is late for more than 24 hours, no credit will be given.

Group Project (30%)

Students will need to form a group of three to four students for the group project in this course. Each group will identify a business problem in which a prototype database system will be designed and implemented. Each group will need to submit a brief proposal for the approval of topic before carrying out the project. At the end of the semester, each group will give a system demonstration and submit a project report. The exact details of what to do for the project will be discussed later on.

Exams (40%)

There will be two written exams. Both written exams will be closed book, closed notes. Students must receive permission to take an exam at a different time at least one week prior to the scheduled date and have a documented emergency. Failure to do so will result in a zero for the exam. Other exams/projects during the same week do not constitute a valid excuse.

Class Participation (10%)

Class participation will be assessed based on both participation inside classroom (in-class discussion) and outside classroom (online discussion).

Assignments, project, exam, and class participation are graded using the following criteria:

- A+, A, A- : demonstrate a clear understanding of and high ability to apply the theory, concepts and issues relating to the topic
- B+, B, B-: demonstrate a good understanding and some application of the theory, concepts and issues relating to the topic
- C+, C, C-: demonstrate a good understanding of the theory, concepts and issues relating to the topic

but limited application relating to the topic

- D+, D: demonstrate mainly description showing basic understanding of the topic but no application
- F: demonstrate limited understanding of the topic and draw conclusions unrelated to the topic

VIII. Academic Conduct

Plagiarism will be reported to the University. Plagiarism and sharing of assignments with others are serious offences and may lead to disciplinary actions. Students should read the chapters on "Plagiarism" and "Copyright" in the Undergraduate/Postgraduate Handbook for details. Students are strongly advised to read the booklet entitled "What is Plagiarism" which was distributed to students upon admission into the University, a copy of which can be found at www.hku.hk/plagiarism. A booklet entitled "Plagiarism and How to Avoid it" is also available from the Main Library.

IX. Course Schedule

Week	***Date***	***Topic***	***Submission***
1	Jan 19 (Thur)	Course Introduction The Database Environment (Ch. 1)	
2	Jan 26 (Thur)	The Database Development Process (Ch. 2)	
	Jan 28 – Feb 3	-- *Lunar New Year Holiday* --	
3	Feb 9 (Thur)	The Enhanced ER Model (Ch. 3-4)	**Project Part 1**
4	Feb 16 (Thur)	The Enhanced ER Model (Ch. 3-4)	
5	Feb 23 (Thur)	Logical Database Design and Normalization (Ch. 5)	**Assignment 1**
6	Mar 2 (Thur)	**Written Exam 1**	
7	Mar 6 – 11	-- *Reading Week* --	
8	Mar 16 (Thur)	-- *University Foundation Day Holiday* --	
9	Mar 23 (Thur)	Physical Database Design (Ch. 6)	**Project Part 2**
10	Mar 30 (Thur)	Introduction to SQL (Ch. 7)	
11	Apr 6 (Thur)	Advanced SQL (Ch. 8)	
12	Apr 13 (Thur)	The Client-Server Database Environment (Ch. 9)	**Assignment 2**
13	Apr 20 (Thur)	**Written Exam 2**	
14	Apr 27 (Thur)	**Project Presentation**	
15	May 4 (Thur)		**Project Report**