

## 204320 – Database Management

### Course Syllabus 2/2019

Department of Computer Science

**Credit:** 3 (2-2-5)

**Prerequisite:** 204214 or 204215 or 204216 or 204217 or 204219

**Lecture:** M. 08.00-10.00 CSB210

**Lab:** Th. 08.00-10.00 CSB303

**Instructors:** Asst. Prof. Dr. Areerat Trongratsameethong

**E-mail:** areerat.t@cmu.ac.th

**Office Hour:** Wed. 9.00-12.00 Lecturer Office 2 (CSB107), Computer Science Department

#### Course Description:

Database concepts, Database Management System (DBMS), the database development process, conceptual database design, logical database design and the relational model, implementing the database design, database administrations.

#### Tools:

1. DBMS Tools
2. Entity-Relationship Diagram Tools
3. Enhanced Entity-Relationship Diagram Tools
4. Database Application Development Tools

#### Grading

Attendance	5%
SQL Lab Quiz	10%
Midterm Exam	30%
Final	25%
Project	30%
<b>Total</b>	<b>100%</b>

#### Grading Scale

A, B+, B, C+, C, D+, D, and F

#### Textbook:

1. Ramez E. and Shamkant N., "Fundamentals of Database Systems -- 6<sup>th</sup> Edition", Addison-Wesley, 2011.
2. Carlos Coronel, Peter Rob, and Stephen Morris, "Database Principles Fundamentals of Design, Implementation, and Management – 10<sup>th</sup> Edition", Course Technology, Cengage Learning, 2013.
3. Thomas M. C. and Carolyn E. B., Database Systems: A Practical Approach to Design, Implementation and Management -- 5<sup>th</sup> Edition, Addison Wesley, 2009.
4. Peter R. and Carlos C., Database Systems: Design, Implementation, and Management 8<sup>th</sup> Edition, Thomson, 2007.

**Supplementary readings:**

1. Standalone DBMS: Microsoft Access, [https://www.tutorialspoint.com/ms\\_access/index.htm](https://www.tutorialspoint.com/ms_access/index.htm)
2. MySQL, <http://www.mysql.com/>
3. PostgreSQL, <http://www.postgresql.org/>
4. Microsoft SQL Server 2014 Express, <http://www.microsoft.com/en-us/server-cloud/products/sql-server-editions/sql-server-express.aspx>
5. DB2 Express Server Edition, <http://www-03.ibm.com/software/products/en/db2-express-server-edition>

**Tentative schedule:**

Week	Topics	
	Lecture	Lab
1	Course Syllabus Midterm Exam Appointment	Standalone DBMS: Microsoft Access Assign Project
2	Introduction	Introducing Entity-Relationship (ER) Diagram Tools
3	วันปีใหม่	
4	Database System Concepts and Architecture	Database Management System Tools
5	The Database Development Process	Data Modelling Using the Entity-Relationship
6	Model The Enhanced Entity-Relationship (EER) Model	The Relational Data Model and Relational Database Constraints
7	วันรับพระราชทานปริญญาบัตร	Relational Database Design by ER- and EER-to-Relational Mapping
8	Basics of Functional Dependencies and Normalization for Relational Databases	Implementing Database Schema using DBMS Tool
9	วันหยุดชดเชยวันมาฆบูชา	Project Progress Report: Database Design
Midterm Period: February 17–23, 2020 (Saturday February 22 <sup>nd</sup> 2020, 12:00-15:00)		
10	Basic Structured Query Language (SQL)	Basic Structured Query Language (SQL)
11	Advanced SQL	Advanced SQL
12	Database Security and Authorization	Database Security and Authorization
13	Controlling Concurrent Access	Controlling Concurrent Access
14	Database Recovery	Database Recovery
15	Submit Project Report	Present and Demo Project
16	วันจักรี	Wrap up
17	วันสงกรานต์	Wrap up
Final Period: April 20 – May 3, 2020 (Friday April 24, 2020, 08:00-11:00)		