

CT5705701 Database Systems and Information Technology (資料庫與資訊科技)

Time and Place:

Thursday 13:20-16:20 (R6, R7, R8), at IB-411

Instructor:

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Course Website:

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Course Description:

This course focuses on the introduction of the state-of-the-art technologies in database system and IT. The goal is to provide students background for research in application of information technology in construction process, and design of e-business/e-work systems in construction/civil industry.

Topics:

- **Database Systems:** DBMS concept and architecture; Conceptual Design of Databases (The Entity-Relationship Model); Relational databases (SQL DDL); Querying languages (SQL etc.); Relational Algebra and Calculus; Schema Refinement and Normal Forms.
- **Information Technology:** Various IT Programming tools include HTML, CSS (Cascading Style Sheets), Scripts (JavaScript and VBScript), ASP (Active Server Pages), and XML (Extensible Markup Language).

References:

No required textbook. Class notes, programming examples, selected articles and handouts will be provided.

Requirements for Grading:

Assignments (40%): There will be several assignments for the topics and programming tools learned in class. Assignments are due at the beginning of class. No late assignments will be accepted. For programming assignments, you need to submit your assignments with the code (and result if requested) printed out on papers, and email me the electronic file(s).

Final Exam (30%): There will be an exam at the end of the semester. The exam covers material on the topics of database only.

Term Project (30%): There will be a term project, which is a database-driven website development using the programming tools introduced in this class. The subject of the website can be freely chosen. A presentation or report on it will be required at the end of the semester.