

## Tamkang University Academic Year 111, 2nd Semester Course Syllabus

|                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                          |            |                                                  |
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| Course Title                                                                                                                                                                                                                                                                                                                                                                             | DATABASE                                                                                                 | Instructor | CHEN, DUEN-KAI                                   |
| Course Class                                                                                                                                                                                                                                                                                                                                                                             | TEIDB2A<br>DEPARTMENT OF COMPUTER SCIENCE AND<br>INFORMATION ENGINEERING<br>(ENGLISH-TAUGHT PROGRAM), 2A | Details    | ◆ General Course<br>◆ Required<br>◆ One Semester |
| Relevance<br>to SDGs                                                                                                                                                                                                                                                                                                                                                                     | SDG4 Quality education<br>SDG9 Industry, Innovation, and Infrastructure                                  |            |                                                  |
| D e p a r t m e n t a l   A i m   o f   E d u c a t i o n                                                                                                                                                                                                                                                                                                                                |                                                                                                          |            |                                                  |
| I . Comprehend professional knowledge.<br>II . Acquire mastery of Practical Skills.<br>III . Establish creative achievement.                                                                                                                                                                                                                                                             |                                                                                                          |            |                                                  |
| Subject Departmental core competences                                                                                                                                                                                                                                                                                                                                                    |                                                                                                          |            |                                                  |
| A. Programming and application ability.(ratio:15.00)<br>B. Mathematical reasoning ability.(ratio:15.00)<br>C. Implementing computer systems ability.(ratio:40.00)<br>D. Computer networking application skills.(ratio:15.00)<br>E. Professional skills for information technology (IT) industry.(ratio:15.00)                                                                            |                                                                                                          |            |                                                  |
| Subject Schoolwide essential virtues                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |            |                                                  |
| 1. A global perspective. (ratio:10.00)<br>2. Information literacy. (ratio:30.00)<br>3. A vision for the future. (ratio:10.00)<br>4. Moral integrity. (ratio:20.00)<br>5. Independent thinking. (ratio:15.00)<br>6. A cheerful attitude and healthy lifestyle. (ratio:5.00)<br>7. A spirit of teamwork and dedication. (ratio:5.00)<br>8. A sense of aesthetic appreciation. (ratio:5.00) |                                                                                                          |            |                                                  |

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| Course Introduction | Students will learn the fundamental concepts of database systems. Relational data model and database design method will be discussed throughout the course. |
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**The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.**

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

- I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.
- II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.
- III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

| No. | Teaching Objectives                                                               | objective methods |
|-----|-----------------------------------------------------------------------------------|-------------------|
| 1   | How to use relational model to describe a collection of data                      | Cognitive         |
| 2   | How to use SQL to manipulate the data in the database                             | Cognitive         |
| 3   | How to design the proper relational data model according to the given application | Psychomotor       |
| 4   | The role of a data base in a modern information system                            | Cognitive         |
| 5   | How to connect and operate a database by programming APIs                         | Psychomotor       |

**The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment**

| No. | Core Competences | Essential Virtues | Teaching Methods    | Assessment                                                                                                 |
|-----|------------------|-------------------|---------------------|------------------------------------------------------------------------------------------------------------|
| 1   | ABCDE            | 12345678          | Lecture, Practicum  | Testing, Study Assignments, Discussion(including classroom and online)                                     |
| 2   | ABCDE            | 12345678          | Lecture, Experience | Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written) |
|     |                  |                   |                     |                                                                                                            |

|   |       |          |                     |                                                                                                            |
|---|-------|----------|---------------------|------------------------------------------------------------------------------------------------------------|
| 3 | ABCDE | 12345678 | Lecture, Experience | Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written) |
| 4 | ABCDE | 12345678 | Lecture             | Testing, Study Assignments                                                                                 |
| 5 | ABCDE | 12345678 | Lecture             | Testing, Study Assignments                                                                                 |

#### Course Schedule

| Week | Date                     | Course Contents                                                     | Note |
|------|--------------------------|---------------------------------------------------------------------|------|
| 1    | 112/02/13 ~<br>112/02/19 | Course overview                                                     |      |
| 2    | 112/02/20 ~<br>112/02/26 | Preparation of a database environment and Database Fundamentals (1) |      |
| 3    | 112/02/27 ~<br>112/03/05 | Database Fundamentals (2)                                           |      |
| 4    | 112/03/06 ~<br>112/03/12 | Basic Database Analysis (1)                                         |      |
| 5    | 112/03/13 ~<br>112/03/19 | Basic Database Analysis (2)                                         |      |
| 6    | 112/03/20 ~<br>112/03/26 | Advanced Database Analysis (1)                                      |      |
| 7    | 112/03/27 ~<br>112/04/02 | Advanced Database Analysis (2)                                      |      |
| 8    | 112/04/03 ~<br>112/04/09 | Teaching administration observation period & National holidays      |      |
| 9    | 112/04/10 ~<br>112/04/16 | Relational Database Design (1)                                      |      |
| 10   | 112/04/17 ~<br>112/04/23 | Midterm Exam Week                                                   |      |
| 11   | 112/04/24 ~<br>112/04/30 | Relational Database Design (2)                                      |      |
| 12   | 112/05/01 ~<br>112/05/07 | Relational Database Design (3) and Physical Database Design         |      |
| 13   | 112/05/08 ~<br>112/05/14 | Basic SQL (1)                                                       |      |
| 14   | 112/05/15 ~<br>112/05/21 | Basic SQL (2)                                                       |      |
| 15   | 112/05/22 ~<br>112/05/28 | Basic SQL (3)                                                       |      |
| 16   | 112/05/29 ~<br>112/06/04 | Advanced SQL (1)                                                    |      |
| 17   | 112/06/05 ~<br>112/06/11 | Advanced SQL (2)                                                    |      |
| 18   | 112/06/12 ~<br>112/06/18 | Final Exam Week                                                     |      |

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| Requirement                      | Late submission of assignment is not allowed. No "make-up" exams or assignments, students will be evaluated based on midterm/final exam and assignments only.                                                                                                                                                                                                                                                                                                                                                                          |
| Teaching Facility                | Computer, Projector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Textbooks and Teaching Materials | Jeffery A. Hoffer et al., Modern Database Management, 13th ed., Pearson Education Limited.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| References                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Number of Assignment(s)          | 8 (Filled in by assignment instructor only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Grading Policy                   | <p>◆ Attendance :            %    ◆ Mark of Usual : 30.0 %    ◆ Midterm Exam : 35.0 %</p> <p>◆ Final Exam :    35.0 %</p> <p>◆ Other &lt;   &gt; :            %</p>                                                                                                                                                                                                                                                                                                                                                                    |
| Note                             | <p>This syllabus may be uploaded at the website of Course Syllabus Management System at <a href="http://info.ais.tku.edu.tw/csp">http://info.ais.tku.edu.tw/csp</a> or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a>.</p> <p><b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p> |