

Tamkang University Academic Year 112, 2nd Semester Course Syllabus

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| Course Title | DATABASE | Instructor | CHEN, DUEN-KAI |
| Course Class | TEIDB2A DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 2A | Details | <ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester |
| Relevance to SDGs | SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure | | |
| Departmental Aim of Education | | | |
| I. Comprehend professional knowledge. II. Acquire mastery of Practical Skills. III. Establish creative achievement. | | | |
| Subject Departmental core competences | | | |
| A. Programming and application ability.(ratio:15.00) B. Mathematical reasoning ability.(ratio:15.00) C. Implementing computer systems ability.(ratio:40.00) D. Computer networking application skills.(ratio:15.00) E. Professional skills for information technology (IT) industry.(ratio:15.00) | | | |
| Subject Schoolwide essential virtues | | | |
| 1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:20.00) 5. Independent thinking. (ratio:15.00) 6. A cheerful attitude and healthy lifestyle. (ratio:5.00) 7. A spirit of teamwork and dedication. (ratio:5.00) 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 models, structure query language, and database design methods 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, Discussion, Practicum | Testing, Study Assignments, Discussion(including classroom and online) |
| 2 | ABCDE | 12345678 | Lecture, Discussion, Experience | Testing, Study Assignments, Discussion(including classroom and online) |
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|---|-------|----------|---------------------------------|--|
| 3 | ABCDE | 12345678 | Lecture, Experience | Testing, Study Assignments, Discussion(including classroom and online) |
| 4 | ABCDE | 12345678 | Lecture, Discussion, Practicum | Testing, Study Assignments, Discussion(including classroom and online) |
| 5 | ABCDE | 12345678 | Lecture, Discussion, Experience | Testing, Study Assignments, Discussion(including classroom and online) |

Course Schedule

| Week | Date | Course Contents | Note |
|------|--------------------------|---|------|
| 1 | 113/02/19 ~ 113/02/25 | Course overview | |
| 2 | 113/02/26 ~ 113/03/03 | Preparation of a database environment and Database Fundamentals (1) | |
| 3 | 113/03/04 ~ 113/03/10 | Database Fundamentals (2) | |
| 4 | 113/03/11 ~ 113/03/17 | Basic Database Analysis (1) | |
| 5 | 113/03/18 ~ 113/03/24 | Basic Database Analysis (2) | |
| 6 | 113/03/25 ~ 113/03/31 | Advanced Database Analysis (1) | |
| 7 | 113/04/01 ~ 113/04/07 | Teaching administration observation period & National holidays | |
| 8 | 113/04/08 ~ 113/04/14 | Advanced Database Analysis (2) | |
| 9 | 113/04/15 ~ 113/04/21 | Midterm Exam Week | |
| 10 | 113/04/22 ~ 113/04/28 | Relational Database Design (1) | |
| 11 | 113/04/29 ~ 113/05/05 | Relational Database Design (2) | |
| 12 | 113/05/06 ~ 113/05/12 | Relational Database Design (3) and Physical Database Design | |
| 13 | 113/05/13 ~ 113/05/19 | Basic SQL (1) | |
| 14 | 113/05/20 ~ 113/05/26 | Basic SQL (2) | |
| 15 | 113/05/27 ~ 113/06/02 | Basic SQL (3) | |
| 16 | 113/06/03 ~ 113/06/09 | Advanced SQL (1) | |
| 17 | 113/06/10 ~ 113/06/16 | Final Exam Week (Date:113/6/11-113/6/17) | |

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| 18 | 113/06/17 ~ 113/06/23 | Flex week, learning activities should be arranged. | |
| Key capabilities | self-directed learning International mobility Information Technology Problem solving | | |
| Interdisciplinary | | | |
| Distinctive teaching | | | |
| Course Content | Computer programming or Computer language (students have hands-on experience in related projects) | | |
| Requirement | Late submission of assignments is not allowed. No "make-up" exams or assignments. Students will be evaluated based on midterm/final exams and assignments only. | | |
| Textbooks and Teaching Materials | Using teaching materials from other writers:Textbooks, Presentations, Videos | | |
| References | | | |
| Grading Policy | ◆ Attendance : % ◆ Mark of Usual : 30.0 % ◆ Midterm Exam : 35.0 % ◆ Final Exam : 35.0 % ◆ Other < > : % | | |
| Note | This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php . ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications. | | |