

# Course Information-Database Design and Implementation

- [Subject Outline](#)
- [Test Information](#)

## summary

Database design and implementation is a course aimed at improving practical application ability based on theories of database definition, data management, and operation process. The content of this course is to develop application knowledge related to database in terms of design and implementation of relational database by using MySQL and MySQL workbench, a design and management tool for effective modeling. This course aims to enhance the computer's application ability by experiencing and learning the whole process from the requirements analysis stage of the database to the implementation and operation.

## Medium name

- Multimedia lesson

## Service schedule

- Additional updates every Monday during the semester.

## lecture content

- Multimedia lesson

| Count | Lecture Topic              | The details  | Textbook Pages | Professor in charge |
|-------|----------------------------|--|----------------|---------------------|
| 1     | Understanding the database | Understanding Databases<br>Database Modeling MySQL Environment     | 1-31           | Jaehwa Jung         |
| 2     | User Requirements Analysis | ● User requirements analysis<br>● Application of user requirements | 35-88          | Jaehwa Jung         |
| 3     | Database modeling          | ● ER Model ● ER Modeling<br>● Forward Engineer                     | 88-100         | Jaehwa Jung         |

| <b>Count</b> | <b>Lecture Topic</b>           | <b>The details</b>  | <b>Textbook Pages</b> | <b>Professor in charge</b> |
|--------------|--------------------------------|---|-----------------------|----------------------------|
| 4            | Database language              | ● SQL ● Data Definition Language ● Schema Creation and Deletion   | 103-112               | Jaehwa Jung                |
| 5            | Table management               | ● Table Management ● Index Management   | 112-135               | Jaehwa Jung                |
| 6            | Data manipulation language     | ● Concepts of data manipulation language ● Data insertion ● Data modification ● Data deletion ● Data retrieval basics | 139 ~ 154             | Jaehwa Jung                |
| 7            | Data retrieval 1               | ● Simple Query ● Conditional Query ● Function   | 154-185               | Jaehwa Jung                |
| 8            | Exercise Solving 1             | Solving problems in Chpater 1 ~ 7   | 1-185                 | Jaehwa Jung                |
| 9            | Data retrieval 2               | ● Group query ● Multiple SELECT statement query ● Inner join ● Outer join   | 185-204               | Jaehwa Jung                |
| 10           | Data retrieval 3               | ● Subqueries ● Views ● Operations with Views  | 205-228               | Jaehwa Jung                |
| 11           | Storage program                | ● Stored Programs ● Stored Procedures ● Representation of Procedures  | 233-260               | Jaehwa Jung                |
| 12           | Function, cursor, trigger      | ● Function ● Cursor ● Trigger   | 260-278               | Jaehwa Jung                |
| 13           | Permission and user management | ● Rights ● User Management ● Rights Management  | 281-309               | Jaehwa Jung                |
| 14           | Transaction and backup         | ● Transactions and locks ● Backup and restore   | 313 ~ 341             | Jaehwa Jung                |
| 15           | Exercise Solving 2             | ● Solve problems in Chpater 9 ~ 14  | 185 ~ 341             | Jaehwa Jung                |

• Attendance class

| <b>division</b> | <b>Lecture Topic</b> | <b>The details</b> | <b>Textbook Pages</b> | <b>Lecture</b> |
|-----------------|----------------------|--------------------|-----------------------|----------------|
|-----------------|----------------------|--------------------|-----------------------|----------------|

| <b>division</b> | <b>Lecture Topic</b>                         | <b>The details</b>  | <b>Textbook Pages</b> | <b>Lecture</b> |
|-----------------|--|---|-----------------------|----------------|
| 1               | Database modeling                            | Study conceptual database modeling based on ER model.   | 2 ~ 34                | lecture        |
| 2               | Tools for Database Design and Implementation | Learn the functional usage of MySQL and the MySQL workbench.  | 35-72                 | Training       |
| 3               | Requirements Analysis and Database Design    | Students will learn how to analyze user requirements and create table design specifications using examples.         | 73-102                | Training       |
| 4               | Database definition                          | Learn how to create and change the database, table, and index views that correspond to the functions of DDL in SQL. | 103-138               | Training       |
| 5               | Database Manipulation 1                      | Learn about simple DML to manipulate data in database schema.   | 139-154               | Training       |
| 6               | Database operations 2                        | Learn about creating advanced manipulation queries using groups, joins, subqueries, and so on.                      | 154-232               | Training       |

#### **Evaluation method and question range**

| <b>Evaluation Type</b> | <b>Assessment Methods</b> | <b>Scope of question</b>   | <b>Remarks</b> |
|------------------------|---------------------------|--|----------------|
| Attendance class       | Practice Assignment       | After each attending class (practice), the exam is scheduled and the attending professor in charge of the class attends directly (submitted as an assignment). |                |

**Note: The above information is subject to change, so please refer to the academic bulletin.**

## references

- <http://www.dbguide.net/>  
<http://www.mysql.com/>

[Print close](#)