

# COURSE DETAIL

## DATABASE DESIGN I

**Country**

Sweden

**Host Institution**

Uppsala University

**Program(s)**

Uppsala University

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

117

**UCEAP Course Suffix****UCEAP Official Title**

DATABASE DESIGN I

**UCEAP Transcript Title**

DATABASE DESIGN I

**UCEAP Quarter Units**

4.00

**UCEAP Semester Units**

2.70

## **Course Description**

This course covers the principles of database design, data representation and information search with modern (relational) database engines, and the practical use and development of databases. Key ingredients are the Entity-relationship model and the query language SQL. The course covers the following: an introduction to the database area and database terminology; entities-relations (ER) modelling and extended entities-relations (EER) modelling; an overview of the relational data model and relational algebra and transformation of the data representation from the ER data model to the relational data model; an introduction to physical database design with functional dependencies and normalization; an introduction to queries, updates and data definition with help of the query language SQL; an introduction to transactions, basic techniques for transaction management and concurrency control and recovery; an introduction to physical database design with file organization, single level index and tree index; an introduction to procedural SQL and the application interface; an orientation in advanced database applications and techniques.

## **Language(s) of Instruction**

English

## **Host Institution Course Number**

1DL301

## **Host Institution Course Title**

DATABASE DESIGN I

## **Host Institution Course Details**

### **Host Institution Campus**

Faculty of Science and Technology

### **Host Institution Faculty**

### **Host Institution Degree**

### **Host Institution Department**

Information Technology

## Course Last Reviewed

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