Dongseo University

Division of Computer Engineering

DataBases

Instructor(s): Hyontai Sug, Ph.D.

Office: UIT309

Phone: 051-320-1733

Email: sht@gdsu.dongseo.ac.kr

Classroom: UIT308

Class Time: MWF 1:00PM-1:50PM

Office Hours: TuTh 1:00PM-3:00PM

Course Description:

This course examines data structures, concepts and principles of database management systems (DBMS); as well as, database design, data modeling, database management and database implementation.

More specifically, it introduces relational data models; entity-relationship modeling; the Structured Query Language (SQL); and database design. Using Microsoft's Access DBMSs as implementation vehicles, this course provides hands-on experience in database design and implementation through assignments and lab exercises. Advanced database concepts such as transaction management and distributed databases, client/server architectures and Web-based database applications are also introduced.

Course Goals & Objectives:

At the conclusion of this course, the successful (passing) students will be able to:

- Describe fundamental data and database concepts
- Explain and use the database development lifecycle
- Create databases using popular database management system products
- Solve problems by constructing database queries like the Structured Query Language
- Develop insights into future data management tool and technique trends
- Critique the effectiveness of Database Management Systems in computer information systems

Course Outline:

- **Week 1 : introduction to databases**
- **Week 2 : an overview of database management**
- **Week 3 : database system architecture 1**
- **Week 4 : database system architecture 2**

- **Week 5 : an introduction to relational databases**
- **Week 6 : an introduction to SQL 1**
- **Week 7 : an introduction to SQL 2**
- **Week 8 : Mid-Term Week**
- **Week 9 : real world database structures**
- **Week 10 : relational algebra 1**
- **Week 11 : relational algebra 2**
- **Week 12 : integrity**
- **Week 13 : views**
- **Week 14 : term project discussion**
- **Week 15 : Final Week**

Textbook(s)

- Required: Databases Demystified: A Self-Teaching Guide, 2nded, By Oppel, McGraw Hill, 2010.
- Recommended: Access 2016 Bible, Michael Alexander, Wiley, 2015.

Class Website: e-Class

Course Assignments & Grading:

- *Exams: there will be two exams; mid-term and final exam.*
- *Quizzes*: quizzes may be given if necessary.
- *Course Projects*: there will be a term project that will cover relatively small database application
- *Assignments*: there will be one or two assignments related to survey and proposal of database application system development
- *Bonus Credit*: students who are actively participate the class may get extra points
- *Grading*: mid-term exam, final exam, term project 25% each, attitude 5%, homework and presence 10%

Grading Policies:

• *Late Work:* All assignments must be submitted on the due date. Late assignments will not be accepted.

• *Make-Ups:* There will be no make-ups given for any of the assignments in this course.

• *Contesting:* Grades can be contested during a two-week period from the time that they are announced. After such period has elapsed, grades may not be contested.

Course Policies:

- Attendance: class attendance will be counted and will be 10% of your grade.
- Academic Misconduct Policy: We really do not expect it, so please do not disappoint us! However, any form of cheating will be penalized and may result in failing the course or expulsion from the university.