CMPT 354 - D100 Database Systems I

Instructor(s): Jiannan Wang  
SFU Burnaby

Calendar Objective/Description:  
Logical representations of data records. Data models. Studies of some popular file and database systems. Document retrieval. Other related issues such as database administration, data dictionary and security.

Instructor's Objectives:  
In 2017, the global database market has reached over 50 billion U.S. dollars in size. Millions of web/mobile applications are using database systems to manage their data. SQL has become a prerequisite skill for being a data scientist or a data engineer. Now is the most exciting time to learn database systems.

In this first database course, we will cover database design and the use of databases in applications, with a short introduction to NoSQL and SQL-on-Hadoop. The course includes extensive coverage of the relational model, relational algebra, SQL, normalization, and database constraints. After this course, the students should have a deep understanding of how to design a database for applications and how to query and manipulate data using SQL.

Prerequisites:  
CMPT 225, and (MACM 101 or (ENSC 251 and ENSC 252)).

Topics:  
- Database History  
- Data Model  
- SQL  
- Database Design  
- NoSQL  
- SQL-on-Hadoop

Grading:  
Will be discussed in the first class

Required Books:  

Reference Books:  

Academic Honesty Statement::  
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies ( http://www.sfu.ca/policies/gazette/student.html ).