CMPT 454 - D100 Database Systems II

Instructor(s): John Edgar

SFU Surrey

Calendar Objective/Description:
An advanced course on database systems which covers crash recovery, concurrency control, transaction processing, distributed database systems as the core material and a set of selected topics based on the new developments and research interests, such as object-oriented data models and systems, extended relational systems, deductive database systems, and security and integrity.

Instructor’s Objectives:
To provide an in-depth coverage of the systems aspects of modern database systems. This course continues with the first database course, CMPT 354, by focusing on (1) physical implementation of DBMS (data storage, index, and query optimization and processing) and (2) transaction management and (3) distributed databases.

Prerequisites:
CMPT 300 and 354.

Topics:
- Data storage
- Index
- Query optimization
- Transaction management, Concurrency control, Crash Recovery

Grading:
To be discussed the first week of classes.
Students must attain an overall passing grade on the weighted average of exams in the course in order to obtain a clear pass (C- or better).

Recommended Books:
Fundamentals of Database Systems 7/e, Elmasri and Navathe, Pearson, 2016, 9780133970777

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).