Computing Science Course Outlines 2019 Spring

CMPT 740 - G100 Database Systems

Instructor(s): Tianzheng Wang

SFU Burnaby

Calendar Objective/Description:
Introduction to advanced database system concepts, including query processing, transaction processing, distributed and heterogeneous databases, object-oriented and object-relational databases, data mining and data warehousing, spatial and multimedia systems and Internet information systems.

Instructor’s Objectives:
This course covers the concepts and current practices concerning the development of data-intensive applications in an enterprise environment. The course begins with an introduction of the database engine, focusing on data persistence in a multi-user environment. With this background, the course proceeds to the discussions of database processing in local-area and wide-area (Web) networks, where multiple applications run on multiple databases, with various middleware modules enabling connectivity and data staging. The focus is also shifted to data consistence, data integration, availability and scalability. A good familiarity of the relational data model and SQL is assumed.

Prerequisites:
None

Grading:
50% Project(s), 40% Final Exam, 10% Class Participation (subject to modification in the first week of classes)

Reference Books:
Principles of Transaction Processing For The Systems Professional, 2nd Edition, Philip A. Bernstein and Eric Newcomer, Morgan Kaufmann, 9781558606234

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).