

16:198:539 - Database Management Systems

Course Number: 16:198:539

Course Type: Graduate

Semester 1: Fall | Spring

Credits: 3

Description:

Implementing components of relational database systems (DBMS): record storage, indexing structures, query evaluation, joins algorithms, query optimization. Understanding and administering a DBMS: security, concurrency control and crash recovery. Tuning DBMS for performance. Recent advances in data management: text-based information retrieval, web search, cloud computing, column store systems. This class focuses on data management from a database administrator's, or implementer's, perspective.

This course is suitable for entry level M.Sc. Students who has not taken a solid undergraduate database courses.

This course counts as category B for M.Sc. degree requirement. This course does NOT count as category B for Ph.D. students

Category: B (M.S.)

Expected Work: Homework and programming assignments.

Learning Goals:

Targeting M.Sc. students in Computer Science

- will be prepared to contribute to a rapidly changing field by acquiring a thorough grounding in the core principles and foundations of computer science (e.g., techniques of program design, creation, and testing; key aspects of computer hardware; algorithmic principles).

- will acquire a deeper understanding on (elective) topics of more specialized interest, and be able to critically review, assess, and communicate current developments in the field.

-will be prepared for the next step in their careers, for example, by having done a research project (for those headed to Ph. D. program), a programming project (for those going into the software industry), or some sort of business plan (for those going into startups).