

**Course Instructor:** Dr Chiranjib Sur

**Course Webpage:** <https://chiranjibsuf.github.io/courses/da215.html>

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**Objectives:** Database Management Systems is the backbone of almost every application, learning it helps you store, organize, and retrieve data reliably, securely, and at scale. It builds the core skills behind real systems: data modeling, SQL, transactions, indexing, and performance tuning. A DBMS project proves you can design a real database from requirements to schema to queries, with integrity constraints and optimized performance. It becomes a strong portfolio artifact because it mirrors how production systems manage data, users, and reliability.

**Prerequisites:** Algorithms, Data Structure and Basic Programming.

**Course Code:** DA215

**Course Name:** Database Management Systems Laboratory

**Credits:** 0-0-3-3

**Syllabus:** Programming laboratory will be set in consonance with the material covered in DA214. This will include database application development using SQL and front-end tools.

**Textbooks:**

- R. Ramakrishnan, J. Geherke, Database Management Systems, 3rd Edition, McGraw Hill, 2014.

**References:**

- H. Garcia-Molina, J. Ullman, J. Widom, Database System: The Complete Book, 2nd Edition, Pearson, 2013.
- P. Bailis, J. Hellerstein, M. Stonebraker, Readings in Database Systems, 5th Edition, 2015.