Course Instructor: Dr Chiranjib Sur

Course Webpage: https://chiranjibsuruf.github.io/courses/da214.html

Email: chiranjib@iitg.ac.in

Objectives:

Prerequisites:

Course Code: DA214

Course Name: Database Management Systems

Credits: 3-0-0-6

Syllabus: Relational DBMS: ER Model, relational model and algebras; Storage and file structure: Overview of secondary storage, RAID and flash storage, indexing (tree, hash, and bitmap), implementation of relational operators; SQL queries, constraints, triggers; Schema refinement and normal forms; Transaction management: ACID properties, concurrency control, crash recovery; Data warehousing and decision support.

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.