Course Description
Emphasizes instruction to optimize the performance of a database management system. Course content includes methods for tuning data access and storage and discussions of resolving data performance problems. Lecture 3 hours per week

General Course Purpose

Course Prerequisites/Corequisites
ITD 250

Course Objectives
Upon completion of this course, the student will be able to:

- Acquire a thorough overview of how to increase performance of a data management system.
- Gain a solid understanding of methods for tuning data access and storage.

Course Content

- Concepts of performance tuning
- Tools available for tuning databases
- Various strategies for optimizing performance
- Creation and interpretation of performance plans

Student Learning Outcomes

- Concepts of performance tuning.
- Understand the concepts of performance tuning.
- Be able to describe the impact of poorly tuned databases.
- Understand the issues involved in performance tuning.
- Tools available for tuning databases.
- Understand the tools available for tuning a database.
- Be able to utilize the tools in optimizing database performance.
- Various strategies for optimizing performance.
- Understand the importance of indexes in database theory.
- Understand the different index plans used for different types of databases.
- Understand the impact of different types of queries on database performance.
- Understand the role that locks play on performance.
- Creation and interpretation of performance plans.
- Understand what a performance plan is.
- Understand the tools available for creating performance plans.
- Be able to interpret and optimize a performance plan.