



University of Pretoria Yearbook 2021

Introduction to database systems 221 (COS 221)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
NQF Level	06
Programmes	BSc Computer Science BSc Information and Knowledge Systems
Prerequisites	COS 110
Contact time	1 practical per week, 4 lectures per week
Language of tuition	Module is presented in English
Department	Computer Science
Period of presentation	Semester 1

Module content

This module will expose students to the evolution of databases systems. They will be able to model data conceptually, in terms of models such as conceptual, relational, object oriented, graph-based and network and the mapping between models, in particular between the conceptual and relational model. Foundational concepts relating to the relational model will be considered, such as: entity and referential integrity, relational algebra and calculus, functional dependency, normal forms, Indexing of database systems and transaction processing will also form an integral part of the curriculum. The physical data representation of the databases system both in memory and within the file system of the operating system will be considered.

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