Global Learning Semesters
Course Syllabus
Course: COMP-352A Database Management & Programming
Department: Computer Science
Host Institution: University of Nicosia, Nicosia, Cyprus

Course Summary		
Course Code	**Course Title**	**Recommended Credit Hours**
COMP-352A	Database Management & Programming	3
Semester Offered	**Contact Hours**	**Prerequisites**
Please contact us	42-45	COMP-151A
Department	**Level of Course**	**Language of Instruction**
Computer Science	Upper Division	English

Course Description

A study of the design and implementation issues in database management systems. Topics include data models, logical/physical database design, data access/search techniques, normalization theory, storage, and optimization. Additional topics include database integrity, consistency, privacy, and security and distributed database systems. Database application design, prototyping and implementation are covered through supervised structured laboratory exercises

Prerequisites

COMP-151A

Topic Areas

1. File Vs. database processing systems. Overview of database processing. Components of database systems. Database applications.
2. The application development process. Entity-relationship model. Semantic object model.
3. Data models. Relational model and normalization.
4. Database design. Database application design.
5. Structured Query Language - SQL.
6. Database administration. Data recovery, concurrency and security.
7. Distributed database processing. Client-server architectures.
8. Database Implementation (Using Microsoft Access, Oracle or other DBMSs).

Readings and Resources

Required Textbooks

- D. M. Kroenke, Database Processing; Fundamentals, Design and Implementation, 7th ed., 1999, Prentice Hall Intern. Ed., (ISBN: 0-13-084816-6).
- Software reference manuals of DBMS used or other textbooks covering the programming requirements of the course.

Recommended Readings

- F. R. McFadden, J. A. Hoffer, Modern Database Management, 5th ed., Addison, Wesley Series, 1999 (ISBN: 0-8053-6039-5).
- C. J. Date, An Introduction to Database Systems, 7th ed., Addison-Wesley, 1999, (ISBN: 0-201-82458-2).