IIST 658 – Database Design and Development

Catalog description
Database principles for microcomputers, with an emphasis on relational database management systems (DBMS) for applications development in the library and information fields. Database design, creation, and maintenance; the user interface; programming concepts. Creation of a working database system.

Accurate description
Database principles and their application within the library and information fields. Emphasis on the relational model and Structured Query Language (SQL). Operational database design, construction, and maintenance. Creation of a working database system using a personal computer. Advanced topics include distributed database systems, data warehouses, local area networks, and distributed processing strategies.

Prerequisite: None
Required texts: None
Optional texts: Larry Rockoff. The Language of SQL. Boston, MA: Course Technology (2011)

Instructor: Ted Borys
Class number: 4668, Spring 2016
Lecture: Wednesday 9:20 AM – 12:10 PM, January 20th to May 4th
Room: HS-004
Office hours: After class and by appointment

Final grade: 50% quizzes, 50% assignments
Extra credit: None offered or available
Academic integrity: Students are expected to do their own work and abide by University policy

Rationale
Information technology rests on four basic foundation blocks: operating systems, networks, programming, and database management systems. This course is a graduate-level introduction to database systems. The assignments will be done using Microsoft Access, but this course is definitely not simply “all about Access”. The SQL syntax taught is independent of any vendor’s software product. Also, there is more to learning about database systems than just mastering SQL syntax. Major topics include: database concepts, logical database design, physical data structures, relational concepts, SQL, transaction management, and several advanced topics including distributed databases, data warehouses, and distributed processing technologies. If your future includes working with database systems as a researcher, programmer, database administrator, business analyst, data analyst, project leader, line manager, or executive manager, this course is invaluable.