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2012

## INFO 674-4S Database Management

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*Xavier University*

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# INFO 674: Database Management

## Online Summer Term, 2012

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### Instructor

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**Instructor:** Dr. (Ari) Thilini Ariyachandra  
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**Office Hours:** Please check Blackboard

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### Mission of the Williams College of Business

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*"We educate students of business, enabling them to improve organizations and society, consistent with the Jesuit tradition".*

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### Course Description and Objectives

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Among other things, the proliferation of electronic commerce has helped create unprecedented amounts of data. Databases are at the core of most information-based systems with which we interact in our daily lives and help keep track of myriad of details of every transaction that takes place in a business. Database management requires multiple perspectives: understanding an organization as a social system and understanding of database technology.

This course is designed for the graduate student who has no prior experience in database systems and it covers the fundamentals of database systems as well as emerging technologies that are likely to play a strategic role in business organizations. Topics include the role of data management systems, data modeling, design, implementation and analysis of relational databases. These topics will be explored from the perspective of both a user and manager of database technologies.

Students will gain experience with data modeling and Structured Query Language (SQL). The course will cover basic data modeling and SQL concepts. The concepts learnt over the term will enable students to design, implement and analyze a prototype database using a relational database system. The goal is to experience the database development life cycle and explore issues relevant to managing corporate data resources. The course will also cover trends in managing organizational memory technologies such as business intelligence.

Upon successfully completing INFO 674, you should be able to

1. Understand the organizational issues involved in data management;
2. Develop a valid data model for a business system of medium complexity;
3. Build and use a relational database;
4. Formulate a wide range of relational database queries;
5. Be familiar with the principles of managing organizational data;
6. Be familiar with the design principles and technology used to manage and exploit organizational intelligence;

These objectives are met through a combination of online synchronous class lectures, readings, lab sessions, a project, and hands-on exercises.

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### Course Prerequisites & Required Skills

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There are no formal prerequisites for this course. However, I assume you are computer literate. This means you know computer history, computer technology, and some business applications. You are familiar and competent in using IBM PC-compatible computers, the Windows Operating System and the World Wide Web. These prerequisite topics, and others, will be assumed by the instructor, since you are registered in this course.

I will NOT assume that you are familiar with any database management system. We will start at the very beginning and learn the use of a basic database management system package (i.e., Microsoft Access). This will help us focus on learning basic data management concepts using a basic database management package. We may explore other packages given the availability of other reliable database platforms.

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### Course resources

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**Text Book : (Available online via library)**

1. Watson, Richard. Data Management: Databases and Organizations, Fifth Edition. Wiley, New York, 2006. (ISBN: 0-471-71536-0)

**Teradata Student Network:**

The class may use resources on the Teradata Student Network. Please register on TSN. Its URL is <http://www.teradatastudentnetwork.com>. The password to access materials is Big Data (Please note that the password is not case sensitive).

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### Course Grading

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Student performance will be evaluated on the following basis:

Class Participation	5%
Database Team Project	25%
Individual Assignments	10%
Group Assignments	10%
Exams	<u>50%</u>
	100%

**IMPORTANT NOTE:** You **MUST** score at least 60% on combined score for the exams in order for the group work points to count toward your final grade. In other words, the group work cannot help you pass the course if you have a failing grade on the exam work.

**Class Participation:**

Students are expected to attend all required synchronous online class sessions on time and interact. Class attendance should be given priority over other activities. If you plan to miss more

than 1 synchronous online class sessions please drop the course as your overall course grade will be reduced by a letter grade. All students are expected to logon to online sessions on time. "A" students must logon to all classes and actively provide thoughtful, relevant comments to class discussions and class exercises.

**Team Project:**

- Each team must have 4 members. Each team will be required to define, elect or volunteer a team leader as the point of contact for the team.
- Most of you will work effectively in teams, each contributing your best effort and proving to be a reliable, productive team member. However, because past experience has proven that team projects always raise the possibility that some team members may not carry their fair share of the load, a confidential peer evaluation will be conducted at the end of the term. This evaluation will impact your grade.

**Assignments:**

There will be individual lab assignments as well as some group lab assignments during the term.

**Exams, Assignments and Team Project Deliverables:**

There will be two exams during the course of the term. They are open book exams BUT will be timed. All students must take them at the scheduled times except for emergencies. Deliverables of assignments/project milestones are due at the start of class on the due date; late deliverables will be assigned 0 credit. Your grade on the database team project will be based on the quality of the deliverables your team produces.

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General Course Philosophies & Policies

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**Academic honesty:**

Academic dishonesty, in any form, is a serious offense. The University Rules and other documented policies of the department, college, and university related academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct.

**Special needs:**

If you have any special needs related to your participation in this course that may influence your performance in this course you should meet with the instructor to arrange reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course.

**Evaluation:**

The final grade awarded will be based on the percentage of the total points awarded as follows:

Scale			
A	94-100		
A-	90-93		
B+	87-89	C+	77-79
B	83-86	C	70-76
B-	80-82	F	Below 70

**Grading:**

Every effort will be made to return papers, exams, etc...within one week of submission.

**Grade appeals:**

If you have a concern about a grade that you receive in this class, you are invited to submit to me an appeal within one week of receiving the grade in question. The appeal should outline your specific concerns with the grade and provide evidence supporting why the grade should be changed. I will then review your appeal and respond as quickly as possible. I reserve the right to re-grade the entire exam, assignment or project milestone in question.

**Communication:**

Email is the best way to communicate with me. I will answer emails within 24 hours of receipt. I expect the same courtesy from you. Email will be a very important mode of communication in this class as we only meet online. Also make sure to check blackboard announcements on a regular basis for updates or additional course material.

Please note that I will often have extended office hours to help with SQL and data modeling. It is also possible that official emergencies may require me to change office hours. Please check blackboard for changes in office hours before coming to see me for office hours. Also, please note that in addition to office hours, given adequate notice (a few hours), I can often come to campus to help you with course work.

**Teaching Style**

The instructional style will primarily consist of online lectures based on the text. The lectures are designed to be **interactive**. Classroom participation is expected and is therefore highly encouraged. Please feel free to ask questions, make observations, and share your relevant real world experiences. It is my intention to make the classroom environment rather informal and relaxed. If you are unsure about a topic PLEASE ASK QUESTIONS using the text or voice functionality. If no one is asking questions, I can only assume that everyone understands the material.

**Attendance**

I expect you to attend each synchronous online session regularly, in accordance with university policy. You are responsible for any material covered, amendments to the syllabus, or announcements made in class, whether you are present or not.