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389-90 Business Intelligence

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INFO 389: Business Intelligence

Instructor

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Mission of the Williams College of Business

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

Course Description and Objectives

Business Intelligence (BI) is one of the current “hot trends/topics” in the business world. It is an area which is growing in demand despite the economic downturn as companies realize that high quality information on their capabilities and those of the competition is essential for decision making to be competitive. According to an IBM Global CIO study, the collective voice of more than 2,500 CIOs worldwide points to *business intelligence* as the top visionary plan for enhancing their enterprises’ competitiveness (IBM 2009). Another industry survey reveals that BI is ranked the number one priority for organizations in the next five years (Strange 2009). While, BI has experienced an unprecedented growth across all industry sectors, there is a world-wide shortage of BI professionals. According to Gartner, this trend is likely to continue in the foreseeable future. Consequently, “the biggest barrier to BI deployment is a lack of user skills and knowledge of best practices” (Beal, 2005, pg. 2).

BI refers to the use of computers to collect and analyze complex information about an organization and its competitors for use in decision making using applications such as dashboards and scorecards. A data warehouse comprises the fundamental BI infrastructure essential for a successful BI solution. In this course, students will be exposed to the fundamentals of business intelligence, work with popular industry BI tools such as Microstrategy, Microsoft Analysis Services, Tableau and Teradata Miner and discover how BI applies to business.

This course will provide a thorough understanding of BI concepts, frameworks and implementation methodologies, how to build and maintain BI solution, and how to use BI for business advantage. By the end of the course, you should be able to:

- Describe the concepts of BI and explain its components, such as operational data stores, data warehouses, data marts, and data access tools.
- Differentiate between OLTP systems and BI solutions.
- Understand the issues that affect the success and failure of BI. Have knowledge of the many issues that complicate BI construction and maintenance.
- Be aware and be able to use of the variety of BI tools.
- Be aware of the emerging trends in the BI industry. These trends may include topics like business performance management, real-time/tactical decision making, and pervasive agile BI.

These objectives are met through a combination of class lectures, readings, case studies, outside speakers, a project, and hands-on computer exercises.

Course Prerequisites

Students should have completed INFO 200. Please drop this course if you do not have this prerequisite. 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.

Course resources

Text Book:

Required: Business Intelligence: Managerial Approach, by Turban, Efraim; Sharda, Ramesh; Aronson, Jay E.; King, David

- ISBN-10: 013234761X
- ISBN-13:9780132347617

Teradata Student Network:

The class will use resources on the Teradata Student Network. Please register on TSN. It's URL is <http://www.teradatastudentnetwork.com>. The password to access materials is ExtremeDecisions.

Course Grading

Student performance will be evaluated on the following basis:

Class Participation	10%
Home Work/Assignments	15%
Group Project	25%
Exam I	25%
Exam II	<u>25%</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 class sessions on time. Class attendance should be given priority over other activities. If you plan to be absent for more than 2 class sessions please drop the course as your overall course grade will be reduced by a letter grade. All students are expected to be present in class on time. Late attendance will count as a partial absence. "A" students must attend all classes and actively provide thoughtful, relevant comments to class

discussions and class exercises. **Please note:** *Using computers or laptops for personal use (e.g., email) will be grounds for reduction of your overall participation grade.*

Assignments:

Students are expected to complete all assignments on time. I will only accept assignments turned in on the due date only. The assignments include exercises such as data modeling, and working with analytical tools. Please hand in **hard copies** of all work unless otherwise specified by instructor.

Deliverables of assignments/project milestones are due at the start of class on the due date; your project grade will suffer significantly if a deliverable is not on time (i.e., 20% reduced for each day late). Your grade on the database team project will be based on the quality of the deliverables your team produces.

Group Project:

Each student will be assigned to a project team to work on a business intelligence project and presentation. The project and presentation description will be distributed as a separate handout in class. Team peer evaluations will be administered to assess each team member's contribution to the project.

Exams:

Exams cover all course materials, as shown in the Class Schedule. The exams contain both objective (e.g., T/F, multiple choice) and essay questions.

General Course Philosophies & Policies

The learning environment:

Please turn off your cell phone, PDA, or another gadget that may produce sound while class is in session. Laptop use during class sessions for any personal work (e.g., email, messaging, etc...) is NOT permitted.

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	95-100		
A-	90-94		
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 a written 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 meet only once a week. 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 course material. 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 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. If no one is asking questions, I can only assume that everyone understands the material.

Attendance

I expect you to attend class 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.

Homework

Homework is to be done individually. You do NOT need to hand in a hard copy of the homework. You will notice in the section on grading that homework assignments are NOT part of your final grade. However, I expect that each member of the class will have worked through each homework. The purpose of the homework is to reinforce the topics covered in the lecture and to provide you the opportunity to apply that knowledge. I will usually go over the homework on the class day following the lecture on the necessary material. Thus, I do not expect that you will be able to work through each of the problems on the first attempt. If you have attempted each of the problems before class, then you should have ample opportunity during class to take any necessary notes. However, I will NOT hand out a solution manual for these problems as we will have worked each of them in class.

Each of the homework will be handed out in class or can be downloaded from the Blackboard. Please let me know in a timely fashion if you have any difficulty downloading the homework. In addition, please note that some of these exercises are quite difficult and may take a while to complete.