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BMIS 370.01: Managing Data and Information

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BMIS 370 – MANAGING DATA AND INFORMATION

The University of Montana, School of Business Administration

COURSE DESCRIPTION

Term / Credits	FALL 2017, 3 credits	
Pre-requisites	Lower Core Complete	
Meets	TUES 2-5 pm	
Instructor	Laurie Toomey, Adjunct Instructor	
Office	GBB 389	
Contact	Phone: 243-6768 (email is best!)	E-mail: laurie.toomey@business.umt.edu
Office Hours	By appointment	

COURSE DESCRIPTION

This Managing Data and Information course is a broad overview of many different concepts. Part of the course is a condensed version of what many traditional database management courses cover including relational database design and usage. In addition to gaining a solid understanding of relational databases, students will learn about the challenges and opportunities of information within the context of an organization.

COURSE OBJECTIVES

Upon completion of this course, a student will be able to:

- Understand general terminology and concepts of databases to effectively manage and communicate about data.
- Recognize the role databases play in an organization, including the responsibilities to secure and protect information;
- Consider ethical implications that arise during the use of information in an organization;
- Analyze a data model for potential problems due to client communication, such as multiple meanings of ambiguous terms, relationships that have been assumed but not confirmed and the level of detail needed for historical data;
- Determine answers to organizational questions using SQL queries;
- Demonstrate ability to use database software such as SQL Server and other software tools;
- Understand the security concerns surrounding data management;

READING MATERIALS AND SOFTWARE

There is no textbook for this class. Content is posted on Moodle either as PDFs OR as links to freely available materials.

Although there is no textbook to purchase, we do use virtual servers through Amazon Web Services in this course.

Amazon Web Services: Estimated cost = \$20-\$40 for the semester if you manage your instances well.

We will be using custom images on Amazon Web Services that are built specifically for the labs. Using Amazon Web Services will allow you to continue working on a lab outside of class or to retry a lab whenever you want. These images have all the software needed for each lab plus you won't have to download the starter projects because they will be ready to go.

The following are the primary software tools used in this class but the list is not exhaustive.

Database:

- SQL Server 2016 Express With Tools (i.e. SQL Server Management Studio)

Programming Application:

- Visual Studio Community 2017 (includes IIS Express)

Data Modeling:

- Power Architect 0.9.15

The above software is all free and you are welcome to download it to your computer. However, there are the following advantages to using Amazon Web Services:

- Everything is exactly like the screenshots in the step-by-step lab instructions.
- The starter files are already installed.
- You can “turn off” the virtual server and then get on any other computer and start it again to continue working.
- If you totally mess something up, you can delete the virtual server and restart with a fresh new one in about 10 minutes.
- You learn about using virtual servers which is an excellent skill to have.

If you choose not to use Amazon Web Services, you will need to bring your own laptop to class with the above software. Sometimes you will need to follow additional instructions for a few labs to get your computer ready BEFORE class begins. **Please let me know if you plan on installing the enterprise software on your own computer.** Although I will not be able to assist you in installing the software, I can make sure links are available on Moodle and that starter files are available so you can follow along in class.

It is highly recommended that you use Amazon Web Services to minimize the work you need to do for both installing the software initially and setting up the labs.

GRADING

Moodle will be used to post grades. POP QUIZZES MAY BE ADDED (SEE ELECTRONIC DEVICES SECTION). The course grade is on a +/- system as shown below.

A+ 100-97%	A 96.99-93%	A- 92.99-90%
B+ 89.99-87%	B 86.99-83%	B- 82.99-80%
C+ 79.99-77%	C 76.99-73%	C- 72.99-70%
D+ 69.99-67%	D 66.99-63%	D- 62.99-60%
	F Below 60%	

Type	First Class	Remaining 13 classes	Total
Weekly:			
Data Modeling and SQL Practice	10	20 x13	270
Initial Independent Post / Survey for first class	5	15 x13	200
Group Discussion Post	5	10 x 13	135
Discussion Peer Eval	5	5 x 13	70
Lab Work	25	25 x13	350
End-of-Class Quiz	25	50 x13	675
SQL Assessment		100	100
Comprehensive Exam		200	200
		TOTAL	2000

COURSE SCHEDULE – SUBJECT TO CHANGE

A detailed schedule is posted on Moodle and updated as needed.

Sep 5 (Tue)	Go through a shortened Unit 1 in class.
Sep 12 (Tue) - Dec 5	<p>Before class, read assigned materials and submit data modeling/SQL activity. By Monday at midnight, post data-driven recommendation in online forum. Before class, read posts made by others in your group (no posting necessary).</p> <p>During class, formulate a group recommendation and discuss in class. During class, work on labs and have whole class study session.</p> <p>End of class, take short quiz on content based on reading and lab.</p> <p>After class by Friday at midnight, post a peer evaluation for discussion. After class by Friday at midnight, post submission for lab.</p>
Dec 12 (Tue)	SQL Assessment Comprehensive Exam
Finals week	Currently scheduled for Tuesday, December 19 at 3:20 pm. May change to Friday, December 15 at 3:20 pm.

QUIZZES AND EXAMS AND ASSESSMENTS

COURSE MATERIALS

There will be assigned and additional readings and possibly videos posted each week which are to be read before class time.

- The quizzes and exams are partially based on the assigned readings.
- The additional readings are used in the discussions below. You do not have to read all the additional readings but you must read one of them.

DATA MODELING AND SQL SYNTAX

Rather than separate units on data modeling and writing SQL statements, this material is integrated throughout the course to allow for continuous practice with a skill many employers value. Each week you will be learning concepts in three main areas:

- Reading and creating simple data models
- Spotlight on different types of models such as different ways to model people data
- Writing SQL statements based on the different models to learn their advantages and disadvantages

DUE: Before class, submit SQL statement practice.

DUE: By Monday at midnight, query data to help support recommendation.

DISCUSSIONS

You will be involved in a discussion group each week. You are randomly placed in an online group a week before the discussion. You are to post a response to the 1-2 prompts listed by Monday at midnight so that all group members can read the responses by class time on Tuesday at 2 pm.

Your response will be based on the following:

- The assigned reading.
- One additional reading from the list posted on Moodle. Pick one that interests you and refer to it in your response. Include at the bottom of your post the following: Additional materials: Name of resource(s). You are welcome to find additional articles or videos that help support your response but if you do please post a link in the additional materials section. You must include one from the approved list though.
- An attachment of supporting data queried from a data source according to the instructions within the post. This may be an Excel file or a formatted report or a dashboard project file. You will usually use some SQL syntax learned for the week.

During class, your group will create a group recommendation.

- Discuss what the group recommendation should be.
- Choose one of the attachments of supporting data as the one the group submits.
- Post the group recommendation to Moodle along with the attachment of supporting data.
- Have a spokesperson for the group informally present the recommendation for whole class.

After class (due by Friday), complete a peer evaluation for the discussion.

- Rate your discussion group members on how prepared they were (initial response and data posted) and the level they participated during the in-class discussion.

QUIZZES

There will be short multiple-choice/short answer/short problem quizzes every week. **MAKE-UP QUIZZES WILL BE GIVEN DURING FINALS WEEK!**

- Quizzes will cover material for the labs, graded and ungraded assignments, reading materials and lectures (on video and in-class).
- If you miss a quiz, you have an opportunity to improve by taking up to 2 make-up quizzes during finals week. I do not give make-up quizzes during the semester.
- Quizzes will usually contain about 12 questions. You will have 15 minutes to take the quiz.
- Quizzes will be given during the last 15 minutes of a class. This is because (a) the quiz is also based off the labs which are done during class, (b) we do a quick in-class review of the material half-way through the course to break up the lab work and (c) it also acts as attendance for the course.

LABS

Labs are usually completed through Amazon Web Services. Students work through the assigned lab at their own pace. While the lab is designed for students to usually finish within an hour or two, you do not have to finish within one sitting. However, if you need to save the lab to work on it later, be aware that you are charged on AWS for instances you keep. While working on your own lab, you can be going through the steps with another student so that you can help each other when there is an error. However, each of you must do the work on separate Amazon instances and each person needs to do the actual work on their instance.

At the end of the lab there will be either a file or a screenshot to submit which is due by Friday at midnight. However, most students should be able to get the work done in class.

SQL ASSESSMENT

SELECT statements including filtering, calculated fields, joins, etc. This is based on the SQL statements you will be working on all semester so this should be a grade booster for you!

You can take this assessment two times. The first assessment is on the last day of regularly scheduled class. The second assessment is on the scheduled finals day and will take up half the class (the other half is for make-up quizzes). Your best score for the assessment is the one recorded in the gradebook. You have 60 minutes to complete the assessment.

COMPREHENSIVE EXAM

One the last day of regularly scheduled classes there will be a comprehensive exam. This will take up about 2/3 of the class with the SQL assessment taking the other 1/3 of the class.

NOTE: If you miss this exam, you will need to take a different make-up exam which will be scheduled no sooner than Friday, December 15 and **it could be from 6 am to 8 am** to allow for multiple people to take the make-up at once without conflicting with schedules. This make-up exam will have more written responses but will cover the same material.

GRADUATE CREDIT – ADDITIONAL REQUIREMENTS

Students taking this course for graduate credit must complete an additional project which will be determined after meeting with the instructor.

ACADEMIC INTEGRITY

It is your duty to abide by the University's academic policies, and it is the instructor's duty to enforce those policies. Cheating of any sort will not be tolerated. Cheating, failure to follow instructions, and/or failure to follow course policies may result in a reduced grade or a failing grade at the instructor's option.

The following message about academic integrity comes from the Provost's office: *"All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. The University of Montana Student Conduct Code specifies definitions and adjudication processes for academic misconduct and states, "Students at the University of Montana are expected to practice academic honesty at all times." (Section V.A., available at http://www.umt.edu/vpsa/policies/student_conduct.php). All students need to be familiar with the Student Conduct Code. It is the student's responsibility to be familiar the Student Conduct Code.*

In addition, the School of Business has a Code of Professional Conduct at <http://business.umt.edu/ethics>.

DISABILITY ACCOMMODATIONS

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). "Reasonable" means the University permits no fundamental alterations of academic standards or retroactive modifications. For more information, please consult <http://www.umt.edu/dss>.

MISSION STATEMENTS AND ASSURANCE OF LEARNING

The University of Montana's School of Business Administration enhances lives and benefits society by providing a world-class business education in a supportive, collegial environment.

We accomplish this mission by acting on our shared core values of creating significant experiences, building relationships, teaching and researching relevant topics, behaving ethically, and inspiring individuals to thrive.

As part of our assessment process and assurance-of-learning standards, the School of Business Administration has adopted the following learning goals for our undergraduate students:

- Learning Goal 1: SoBA graduates will possess fundamental business knowledge.
- Learning Goal 2: SoBA graduates will be able to integrate business knowledge.
- Learning Goal 3: SoBA graduates will be effective communicators.
- Learning Goal 4: SoBA graduates will possess problem solving skills.
- Learning Goal 5: SoBA graduates will have an ethical awareness.
- Learning Goal 6: SoBA graduates will be proficient users of technology.
- Learning Goal 7: SoBA graduates will understand the global business environment in which they operate.

ELECTRONIC DEVICES

Cell phones and other electronic devices should be turned off and put away. **If I see any electronic devices in use, I will give a pop quiz for the entire class.** This will increase the total points possible for the class.