



SPRING 2013

MGMT 639 – Advanced Database

SECTION: 001

Instructor Information

Instructor:	Josh Saiz
E-Mail:	josh@mgt.unm.edu <i>(use only when UNM Learn Email is not functioning)</i>
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Office:	IT/IA House (across the street from the GSM building)
Office Hours:	By Appointment (preferred) and via online sessions (see below)
Department Chair:	Dr. Steven Yourstone (MIDS Chair)
Preferred Method of Contact:	Blackboard messages for personal communication Blackboard discussion board for class questions

Instructor Response Time

Communication

I routinely check UNM Learn for postings or emails, Monday (12 pm) – Friday (5 pm) and sometimes on the weekend. You can anticipate a **24 to 48 hour** response, Monday – Thursday. I will try and respond during the weekend (Friday afternoon to Sunday) else by noon the following Monday or earlier.

Grading

Graded assignments are routinely returned to students within 10 days after an assignment has been submitted.

Course Information

Course Objectives & Description

This primary objective of this course is to provide you with the skills needed to function as a database administrator and developer. The course will cover topics such as database performance, database security, and database management system (DBMS) evaluation will be covered in detail. Topics such as SQL scripting/programming will not be covered as it should have been covered in previous database courses. This course will expand on knowledge from previous database courses (e.g., MGMT 329 or MGMT 637).

The course will also include a semester database project that allows the student to be the database designer, developer and administrator.

The following are proposed topics for the course.

- Database Management System (DBMS) Evaluation
- Database Configuration (hardware, software)
- Database/Query Performance
- DBMS Security: Logins, Users, Permissions
- SQL Injection
- Extension of DB Objects: Stored Procedures, Functions, Triggers, Indexes
- Data Warehouse (concepts)
- Development Approaches (Web & ERP)

Prerequisites

MGMT 329 (Undergraduate-Level DB Management) or MGMT 637 (Graduate-Level DB Management)

Course Orientation

An online orientation video will be posted on the course site (in UNM Learn). An additional online session using the embedded Collaborate system will be held on Thursday, January 17, 2013 at 9:00 pm to answer any outstanding questions or concerns. Please review the Web Conferencing section for details on how to use the Collaborate system.

Web Conferencing: Collaborate

Web conferencing will be used in this course for meeting with the instructor and your group. As the lectures may not be enough for you to learn the material, **optional** online meetings will be made available for students to ask questions. One day a week (day and time TBA), an online Q&A session will be held using Collaborate via UNM's Learn package. The session will be offered to all students to ask any outstanding questions. The session will also be recorded so you can review the material again, or if you happened to miss a session, you can view the material covered in each session. These sessions are optional, but provide a good basis to interact with the instructor and gain additional information related

to assignments and exams. When necessary and requested, additional sessions may be added and will be posted in advance on the Learn site.

Each online session will be recorded, but I will be noting which students have actively participated in each session. It is in your best interest to attend a number of these sessions as with past semesters, these sessions have been valuable in clarifying the material.

Students are expected to be prepared for online meetings. Learning is enhanced when all are prepared. The instructor may ask questions from each student during the session. Personal experiences that apply to the discussed material are encouraged. In addition, the sessions may be visual and those who learn from visual components will benefit even more.

The Collaborate system (available from the course main page) will allow the instructor to interact with each student and their desktop. It is advised that you have the latest Java updates applied to your system. Based on experience, Firefox may work better with Learn than Internet Explorer, and so if you are having difficulties accessing the site and/or Collaborate, consider using another browser.

As this class will tend to be “virtually hands-on”, the Anderson VLAB will be used and in order for you to have a good experience during the online sessions, it is advised that you have all VLAB sessions ready before each online meeting begins. More information about the VLAB is available below.

For the online sessions, you will need:

- A USB headset with microphone. Quality entry models are widely available at BestBuy, Walmart or online.
- A high speed internet connection is highly recommended for these sessions. A wireless internet connection may be used if successfully tested for audio quality prior to web conferencing.
- Java installed and updated on the system you are using to connect.

Textbooks and Supplementary Materials

Required Textbook

1. David M. Kroenke, D. Auer, Database Processing, 12th Edition, Prentice Hall, 2011, ISBN-10: 0132145375, ISBN-13: 9780132145374
2. Alfred Basta, M. Zgola, Database Security, Delmar Cengage Learning, 2011, ISBN-10: 1435453905, ISBN-13: 978-1435453906

Older editions of the Kroenke text (e.g. 11th Edition) will be accepted as the text will be used as a reference, and the content should be about the same as the current edition.

The “Database Security” text is not required until the middle of the semester (March). You can acquire this text using online sources (e.g. Amazon).

Supplementary Materials

1. Headset w/mic (approx. \$50) for use in the Web Conference Link (used for Online Meetings with Instructor and Group). Students MUST use a headset with mic which reduces feedback instead of built-in computer mic.
2. Material from the text will be summarized in PowerPoint slides but the slides will not provide sufficient depth to prepare you for exams and assignments. Additional reference material will be posted on the course web site throughout the semester.

Course Software & Anderson Virtual Lab (VLAB)

The majority of homework projects will be completed using Windows Server 2008R2 (server), SQL Server and mysql.

The Anderson Virtual Lab (VLAB) will be used in class to emulate a database server. A server and client will be installed and configured and made available to you. Although, you may use a local installation of the DBMS systems, but keep in mind, that depending on the assignment, you may need to use the VLAB to post your solution.

Each student will use his/her NetID and associated password. To ensure that every student has access, it is advised that you **change your password at the beginning of the semester**. This will ensure that your NetID is recognized by the UNM LDAP/Active Directory infrastructure and most importantly, that you are not prompted to change your password during the semester (UNM requirements). To change your password visit the following site: <https://netid.unm.edu>

Anderson VLab Web Site: <https://vlab.mgt.unm.edu>

Technical Considerations

In order to access your online courses students need to log onto [Blackboard Learn](#). (<https://learn.unm.edu>). **The Learn site is different than the standard WebCT system; It is advised that you review the Learn overview documentation.**

Online Courses Require

- A high speed Internet connection is highly recommended.
- Supported browsers include: Internet Explorer, Firefox, and Safari. Detailed Supported Browsers and Operating Systems: <http://kb.blackboard.com/pages/viewpage.action?pageId=38830689>

Any computer capable of running a recently updated web browser should be sufficient to access your online course. However, bear in mind that processor speed, amount of RAM and Internet connection speed can **greatly** affect performance.

Online courses perform best on a high speed Internet connection. Those using dial-up connections will experience longer page load times and much slower performance when accessing their online course.

Many locations offer free high speed Internet access including [UNM's Computer Pods](#) or one of UNM's many [Statewide Centers](#).

- For additional information: <http://learn.unm.edu>
- For UNM Blackboard Learn Technical Support: (505) 277-5757 (M-F 8am - 5pm) or learn@unm.edu.
- For Web Conference Technical Help: (505) 277-0857 or media@unm.edu

Assessment and Grading

Instructor Expectations

I will give each of you 100% of my commitment to help you successfully complete my class, however, I expect 100% of your commitment to this class, which includes reading the textbook, using the resources available in Blackboard Learn, watching posted videos, posting questions in the discussion board, completing your homework, working as groups, preparing for exams and reviewing your graded homework and exams and following up with questions to the instructor.

Exams

Two (2) exams will be given and are listed in the course schedule. Review questions will be distributed before each exam. The online meeting prior to each exam date will be devoted as an exam review. In addition, a week will be devoted to exam review so you may prepare for the exam at the end of the week.

Exams will be done in person and are scheduled to be taken in the Anderson Computer Lab, ASM 1002. See the schedule for exact exam dates and times. If you cannot attend an exam date or need services not offered at Anderson, please notify the instructor of your exam location and date/time.

If a student lives more than 90 miles outside of the Albuquerque area, students can arrange (with instructor approval) to take the final at a UNM branch campus or a pre-approved testing site. Students must request approval to take the final at another testing site **four (4)** weeks before the final exam date. Students must also schedule and confirm the test date with the instructor and the proctored site. Contact the instructor for a list of "UNM approved" proctor sites.

As with all exams, it is your responsibility to be prepared and honest. Any signs of dishonesty will be severely punished.

Assignments

Homework:

Homework projects will be assigned during the semester. Each project is a practical exercise that requires you to complete tasks normally performed by a database administrator. Instructions for each project will be distributed at least two weeks prior to the due date. Students will be expected to complete homework projects **individually**.

Group Project:

To fully grasp the material, students will be required to perform a project that involves a local business or organization and evaluates the organization's current database system and assists the organization in creating or redesigning a new system. If necessary, this project may be combined with other MIS/IA projects from another class.

It is strongly recommended that groups be kept very small – no more than 3 or 4 people. Please consult with the instructor if more than 3 individuals are necessary.

A final paper will be submitted that describes the current system (or lack of) and provides documentation on the new/designed system including the necessary code for the database. The paper should also include information about administration of the database, including disaster recovery and security issues (current and new).

Before work is begun, the organization to be evaluated should be submitted to the instructor for approval. More details about the group project will be distributed on the course site.

Grade Weighting

1. Exams 50%: Exam 1 - 15%, Exam 2 - 15%
2. Homework Projects (5) 50% (equally weighted)
3. Group Project 20%

Final grades will be issued on a fractional basis. I believe that an "A" is different than an "A-", a "B+" is different than a "B", etc. If you put forth the effort, you can earn the grade that you set to achieve. I follow the standard grade points for letter grades:

Grade Letters and Percentages

A+: 100-97%	A: 96-93	A-: 92-90
B+: 89-87	B: 86-83	B-: 82-80
C+: 79-77	C: 76-73	C-: 72-70
D+: 69-67	D: 66-63	D-: 62-60
	F: 59 Or Less	

Assignments and Participation

Weekly Tasks

1. All the information you need for each week is found under the corresponding weekly module.
2. Each module includes:
 - a. PowerPoint or other Instructor handouts
 - b. Lecture Videos
 - c. Lab Exercises / Homework Assignment
 - d. Discussion Board – Use this to review any questions that may have been posted along with potential answers to those questions.
 - e. Additional information pertaining to the topic of the week.
3. Read the assigned chapter(s) or cases for the week (see the Course Schedule)

4. Review the PowerPoint slides.
5. View the lectures videos, which discuss the material. Keep in mind that the videos will be broken into smaller, digestible pieces that should not be longer than 20 minutes.
6. Attend an online meeting.
7. Continue to work on any Group Project work that is necessary.
8. Post any questions about the homework or project in Discussions under the appropriate topic.
9. If you need to post a message only to the instructor use UNM Learn's email and select "Josh Saiz".

class Participation

Just because the class is a distance learning class does not mean we are disconnected. The posting of homework assignment questions creates a learning community where students are supported and frustrations are reduced while also reinforcing knowledge.

If you choose to participate, keep in mind that postings should be constructive and supportive. Postings should guide students to how to solve a problem, but not provide actual answers.

Blackboard Learn Tracking

Blackboard Learn automatically records all students' activities including: your first and last access to the course, the pages you have accessed, the number of discussion messages you have read and sent, chat room discussion text, and posted discussion topics. This data can be accessed by the instructor to evaluate class participation and to identify students having difficulty.

Inclement Weather, Course Interruptions and Scheduled Maintenance

Inclement Weather

In the event of inclement weather or school closures or delays which affect proctored exams (especially finals) or required face-to-face meetings, the instructor will provide guidance to how proceed. Alternative arrangements will be made to ensure that "make-up" exams are fair.

In the event of an unexpected course interruption

If Blackboard or the VLAB is down on the day an assignment or exam is due, email the instructor and describe the problem you are encountering.

Scheduled Maintenance

Blackboard Learn has a daily scheduled maintenance window from **4:30 am – 5:30 am** when Blackboard Learn is not available. There is also a routine maintenance window every **Saturday from 6:00 am – 12 noon** which may be used for system maintenance. In addition, UNM IT may conduct general system maintenance that affects multiple systems on campus, including Blackboard Learn. The general system maintenance window is on **Sundays from 6:00 am – 12 noon**. Announcements for the Saturday and Sunday maintenance windows are normally posted in Blackboard Learn two weeks ahead of time to notify users of planned outages.

Course Expectations & Ground Rules

Course Expectations

Although the basic organization of the course should remain constant, other factors may change during the semester including the scope, number and timing of assignments, format of lectures, online meeting times, and the format and content of exams. Because of the potential for change, you should not assume that anything in the schedule is set in stone. You should also ensure that you keep up with the class through viewing the lecture material, regular “participation” within discussions, and prompt assignment completion. Students who "disappear" for an extended period may find the course substantially altered when they return.

As with all courses, you are expected to devote an adequate amount of time for this course. Expect to spend between 10 and 15 hours per week: reviewing lectures, doing lab exercises or homework assignments, and doing group project work. Do a little every day and **DO NOT TRY TO DO EVERYTHING IN ONE DAY!** There is not enough time in a day to do it all.

Example Week (weeks start on a Tuesday and end the following Monday):

- Tuesday: Log on to Learn and review any messages/announcements. Read the material for the week.
- Wednesday: Log on to Learn and review lectures.
- Thursday: Log on to Learn and finish lectures and review the weekly assignment.
- Friday: Log on to Learn and review messages/announcements; start assignment.
- Saturday/Sunday: Continue assignment and review any messages/announcements on Learn.
- Monday: Finish up any assignments and review any messages/announcements on Learn.

Communication Guidelines

The majority of communication will take place on the Learn course site. As there is an email component within Learn that pertains to this course, all email communication between the student and instructor will take place using the **Learn email** interface. Much of my email is work related and managing work and course email can be confusing. Your message can be lost in my Inbox as I tend to receive more than 100 messages a day. To minimize any loss of email communication, **all email should be sent using Learn and NOT sent to the instructor's email address unless it's an absolute emergency.** Responses to your email questions will be done within **24-48 hours** (1-2 days). If you submit a question during the weekend, a response may not be submitted until the following Monday or Sunday evening. I will attempt to respond to “weekend” submissions as soon as I am able. Check your Learn email and announcements regularly as you may miss something related to course assignments and material.

Netiquette Ground Rules

- In following with the UNM Student Handbook, all students will show respect to their fellow students and instructor when interacting in this course. Take Netiquette suggestions seriously. Flaming (personal insults or attacks) is considered a serious violation and will be dealt with promptly. Postings that do not reflect respect will be taken down immediately.

- Respect Others' Copyrights
- Don't type in ALL CAPS
- Use proper grammar and spelling (type your postings in WORD first in order to use spell check then copy and paste into Blackboard Learn)
- Students are expected to follow UNM's Respectful Campus Policy 2240

Instructor Drop Policy

The instructor may drop a student, if the student does not complete the **Questionnaire Survey, Welcome Survey or Welcome Posting by the end of the first Sunday of the course**. The instructor may also drop a student during the semester, **if a student fails or misses assignments or an exam and does not contact the instructor within one week of the failed/ missed assignment or exam**. Students who miss Exam 1 and do not contact the instructor via Blackboard Learn messaging within one week of the close of Exam 1 will be dropped from the course. Students who have not dropped and do not take the final will receive a "W" for the course.

This course falls under all UNM policies for the last day to drop courses, etc. Please see <http://www.unm.edu/studentinfo.html> or the [UNM Course Catalog](#) for information on UNM services and policies. Please see the [UNM academic calendar](#) for course dates, the last day to drop courses without penalty, and for financial disenrollment dates.

Student e-Readiness

Online classes are often incorrectly thought to be easier than in person classes. Online courses are not correspondence courses. They are designed to mirror in person classes and due to the self-discipline required they can be more challenging than in person classes. If this is your first online class please take UNM's Online Class Readiness Quiz at <http://statewide.unm.edu/online/get-started/online-ready-quiz.html>

Online UNM Resources

- **UNM Libraries:** <http://www.unm.edu/libraries>
- **CAPS** <http://caps.unm.edu/> - CAPS is a free-of-charge educational assistance program available to UNM students enrolled in classes.
- **Online Writing Lab (OWL)** - <http://caps.unm.edu/writing/owl> - students may submit academic papers required for UNM course or degree fulfillment or application submissions online for proofreading.

- **CAPS Virtual Tutoring Lab** - <http://caps.unm.edu/online/vt/> - Students can chat with a tutor in 5 subjects depending upon availability.
- **Smarthinking** - <http://caps.unm.edu/online/smarthinking/cas> Smarthinking™ is a Washington, D.C. based organization that provides online tutoring and academic support for university students 24 hours a day, 7 days a week in various common courses.

Students with Disabilities

Qualified students with disabilities will be provided reasonable and necessary academic accommodations if determined eligible by the Accessibility Resource Center (<http://as2.unm.edu/>). Please refer to UNM's Disability Policy for further information, <http://pathfinder.unm.edu/common/policies/academic-adjustments.html>

The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodations of their disabilities. If you have a disability requiring accommodation, please contact me immediately to make arrangements as well as Accessibility Services Office in 2021 Mesa Vista Hall at 277-3506 or <http://as2.unm.edu/index.html>. Information about your disability is confidential.

If you are a qualified person with disabilities who might need reasonable accommodations in academic settings, please communicate with me as soon as possible so that we may make appropriate arrangements to meet your needs. Frequently, we will need to coordinate accommodating activities with other offices on campus, so that course materials can be made available in alternative formats.

Technical Support

Students are responsible for meeting course deadlines. If you experience technical problems, please exercise one or all of the following options:

- Online Student Support w/contact info at <http://statewide.unm.edu/online/support/>
- NMEL Help Desk at learn@unm.edu
- Media/web-conferencing Tech Support at media@unm.edu or 505-277-0857 or 1-877-688-8817

UNM's Knowledge Base - http://fastinfo.unm.edu/prod/index_student.php

Copyrighted Materials

All materials in this course fall under copyright laws and should not be downloaded, distributed, or used by students for any purpose outside this course. <http://www.unm.edu/~counsel/general/copyright.htm>

Academic Integrity

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. Dishonesty is defined as a lack of truth, honesty or trustworthiness. Cheating is defined as influencing or leading by deceit. Deceit is defined as intending to mislead and commonly suggests a false appearance.

Students should be familiar with UNM's [Policy on Academic Dishonesty](#) and the [Student Code of Conduct](#) which outline academic misconduct defined as plagiarism, cheating, fabrication, or facilitating any such act.

Examples (not exhaustive) of dishonest behavior include:

- Uses or attempts to use unauthorized aids in examinations or other academic assignments to be submitted for evaluation
- Misrepresentation of data, results or sources for papers or reports
- Copying another student's work

Anderson School of Management faculty, staff and students commit to values of trust, honesty, integrity, and accountability. We will not tolerate academic dishonesty. **By enrolling in any course at Anderson, the student accepts the Anderson Academic Honesty Code and affirms the following pledge: I will not lie, cheat, fabricate, plagiarize or use any other dishonest means to gain unfair academic advantage.**

Any violation of the code of conduct will be taken very seriously and appropriate sanctions will be applied. For full text of Anderson's Academic Honesty Code, please visit <http://www.mgt.unm.edu/honesty>

MGMT 639 (Advanced DB) Spring 2013 Schedule

Below is the proposed schedule for the Spring 2013 semester for MGMT 639. Keep in mind that the dates and topics listed **may change** due to extended coverage on one topic or adjustments throughout the semester. Refer to the course web site for the latest updates to this schedule. To allow for adjustments for assignments and other things, each week will **begin on Tuesday and end the following Monday**.

Homework Assignments are due Fridays at 5pm

Updated February 13, 2013

Week	Topics	Readings	Assignment
1 Jan 14-21	Orientation SQL Review	Kroenke: Ch 2, 6	
2 Jan 22-28	DBMS Systems	Kroenke: Ch 10 including 10A, 10B	Homework 1 Assigned <i>Project: Members Due</i>
3 Jan 29-Feb 4	DB Configuration: Hardware, Software	Kroenke: Ch9	Homework 1 Due Homework 2 Assigned
4 Feb 5-11	DB Performance	Kroenke: Ch 9, 10 Additional TBA	Homework 2 Due Homework 3 Assigned
5 Feb 12-18	DB Objects	Kroenke: Ch 7, 10, 11	Homework 3 Due <i>Project: Organization Decision Due (Feb 15)</i> Homework 4 Assigned
6 Feb 19-25	XML		Homework 4 Due
7 Feb 26-Mar 4	Review Week... EXAM 1 at ASM 1002, MARCH 2 @ 9AM!		
8 Mar 5-9	Data Warehouse/Business Intelligence Concepts	Kroenke: Ch 13	
Mar 10-17	SPRING BREAK!!!		
9 Mar 18-25	DB Security	Basta: Ch 6 Additional TBA	<i>Project: Analysis Draft Due (Ma 18)</i> <i>Project: Presentation Decision Due (Mar 25)</i>
10 Mar 26-Apr 1	SQL Injection: Identifying	Basta: Ch 7 Additional TBA	<i>Project: Prelim Design Due (Mtg during week)</i> Homework 5 Assigned
11 Apr 2-8	SQL Injection: Protecting	Basta: Ch 8 Additional TBA	
12 Apr 9-15	Security Auditing/Testing	Basta: Ch 9, 10 Additional TBA	<i>Project: System Review (Mtg during week)</i>
13 Apr 16-22	Open Topic/Guest Lecturer Week...		Homework 5 Due
14 Apr 23-29	Review Week... EXAM 2 (ONLINE): Opens APRIL 27, Closes APRIL 28 @ 10pm		
15 Apr 30-May 4	Project Documentation Due May 3, 2013 at 5pm: Documentation and Code Project Presentation (Times Scheduled by Group, scheduled during week)		

Online Sessions (Optional): Monday Evenings, 8:30-9:30p

Dates To Remember:

- January 21 – Martin Luther King, Jr. Day (UNM Off)
- February 1 – Last day to drop without a grade
- March 10-17 – Spring Break
- April 12 – Last day to drop without approval from Dean; WP/WF issued
- May 3 – Last day to drop with approval from Dean; WP/WF issued
- May 6-11 – Finals Week for traditional classes
- May 11 – Last day of Spring semester

Homework Dates

Homework Assignment	Assign Date	Due Date
1	January 22	January 29 at 11:59pm
2	January 29	February 5 at 11:59pm
3	February 5	February 15 at 5:00pm
4	February 13	February 22 at 11:59pm
5	March 26	April 19 at 5:00pm

The dates above may change. It is advised that the course site be visited regularly to view the latest schedule and assignment dates.

Group Project: Refer to the Project Requirements document for a list of deliverable due dates.

Exam Dates (Dates Will NOT Change)

- Exam 1: March 2, 2013 at 9am in ASM 1002
- Exam 2: Opens April 27, 2013 (Online), Closes April 28, 2013 at 10pm