

MIS 766: Data Management

Summer II 2020

Class Times: June 8 – July 10, 2020
Class Venue: Online

Required Texts: Principles of Database Management: The Practical Guide to Storing, Managing and Analyzing Big and Small Data.
ISBN: 9781107186125
Wilfried Lemahieu, Seppe vanden Broucke, Bart Baesens.

Required Cases: Harvard Business cases, link on WebCampus

Course Description

Concepts, principles, issues, and techniques for managing corporate data resources. Techniques for managing design and development of large database systems including logical data models, concurrent processing, data distribution, database administration, data warehousing, data cleansing, and data mining.

Learning Objectives

The course is designed to provide graduate students with a level of knowledge that allows the student to be an effective manager in an organization, whether public or private. The focus of the course is to provide managers tools and understanding so that they can better manage data within organizations. By the time the students finish the course, they should be able to

- Understand key concepts of managing data in organization, including structured and unstructured data.
- Understand the process of designing and implementing a relational database system.
- Design and understand queries using Structured Query Language (SQL) to communicate with database system.
- Understand key management issues surrounding database technology and emerging business applications enabled by database technology;
- Understand basic concept of data privacy and security.

WebCampus

Course information including the syllabus, class assignments, and notes will be posted on WebCampus (<https://webcampus.unlv.edu/>). NO hard copies of handouts and notes will be made available in class. If students desire hard copies of assignments and notes, they should print them off. Students will also submit their assignments electronically using WebCampus.

Grading

The final grade is based on a cumulative, weighted-point total. The following is a breakdown of the components and the distribution of points.

Assignment (5 total)	15 % (3 % each)
Case analysis (4 total)	20 % (5 % each)
Test (4 total)	20 % (5 % each)
Final exam	15 %
Project	20 %
Class participation	10 %
Total points	100%

- **Assignment:** Assignments must be of individual efforts. Everyone is expected to come up with his/her own solution. **Do NOT show, give, trade, or copy solutions from anyone**; any forms of academic dishonesty/misconduct will be treated seriously. If one has difficulties with the assignments, please contact the instructor during the office hours or make arrangements outside the office hours. All assignments should be submitted via WebCampus. Late submissions will NOT be accepted.
- **Case analysis:** Relevant cases from the Harvard Business School case library have been selected for this course. Please follow the link to purchase the cases: <https://hbsp.harvard.edu/import/727570>. For each case, the instructor will provide several questions about the case that will be used to guide class discussion. Each student should answer those questions based on his/her own reading and deliberation. The case analysis should be submitted via WebCampus with the checking for plagiarism using Turnitin. Late submissions will NOT be accepted.
- **Test and exam:** This course will use four tests to cover the concepts in the first four major portions of the course. The final exam is the only cumulative examination in the course. All required lecture/text materials, cases, and individual assignments will be sources of examination questions. Make-up exams will be given ONLY in extreme and pre-approved circumstances. LockDown Browser & Monitor are needed to the final exam.
- **Project:** Students are expected to form a group of 3 - 4 to conduct a project during the semester. The students are required to identify and analyze the problems of an organization and then design and implement a database system, using the concept and methods discussed in the class. The groups are also required to demonstrate the values of the database by designing queries that can generate information to support managers' decision-making. The group project will be scored based on a project proposal, the database design and implementation, a set of queries that answers business questions, a project report, and a presentation. Detailed project guidelines are available on WebCampus. Using a real-world organization is encouraged, with mock-up data if there are confidentiality concerns. A group grade will be assigned on the basis of the quality of the work. The grade for each individual member will then be determined, taking into account the group members' peer-evaluation.
- **Class participation:** Class attendance is important and will be a critical factor for doing well in this course. Students are encouraged to actively participate in class discussions every day. There will be random in-class exercises that will be assigned, completed, and submitted. Turning in every in-class exercise will only guarantee a participation grade of 5. Students need to actively participate in class discussions in order to receive a higher grade.

Grading Scale

93% and over	A
90%	A-
88%	B+
82%	B
80%	B-
78%	C+

72%	C
70%	C-
68%	D+
62%	D
60%	D-
Below 60%	F

Class Schedule (subject to change)

Date	Topics	Chapter	Assignment
Week 1: Introduction and Conceptual Design			
June 8	Class overview Introduction to data management	1	
June 9	Database concepts	2, 3	Project: Formation of teams
June 10	Entity-relationship modeling (1)	3	
June 11	Entity-relationship modeling (2)	3	Assignment 1: E-R model
June 12	[Case] Calgary Drop-In Centre		Case Analysis 1
Module 2: Logical Design and Implementation			
June 15	Test 1: Database concepts and Conceptual Design Logical schema (1)	6	
June 16	Logical schema (2)	6	Project: Proposal
June 17	Logical schema (3)	6	
June 18	Database architecture	2, 15	Assignment 2: Logical schema
June 19	[Case] Predicting Consumer Tastes with Big Data At GAP		Case Analysis 2
Module 3: SQL			
June 22	Test 2: Logical Design SQL (1): Data definition language	7	
June 23	SQL (2): Basic queries and operators	7	Project: Database design
June 24	SQL (3): Joins	7	
June 25	SQL (4): Aggregation functions and grouping	7	Assignment 3: SQL (1)
June 26	[Case] Autopsy of a Data Breach: The Target Case		Case Analysis 3
Module 4: Advanced SQL			
June 29	Test 3: SQL Advanced SQL (1): Nested queries	7	
June 30	Advanced SQL (2): Insert, update, and delete	7	Assignment 4: SQL (2)
July 1	Advanced SQL (3): Views, procedure, and triggers	7, 9	
July 2	Transaction management and error recovery	14	Assignment 5: SQL (3)
July 3	[Case] Have Text, Will Travel: Can Airbnb Use Review Text Data to Optimize Profits?		Case Analysis 4
Module 5: Technologies and Applications			
July 6	Test 4: Advanced SQL Data quality and governance	4, 18	Project: Database implementation
July 7	Object-oriented, XML, and NoSQL database Unstructured data	8, 10, 11	
July 8	Data security and protection The dark side of data	Supp. Material	
July 9	Term project presentation		Project: Presentation and report
July 10	Final Exam		

University Policies

Public Health Directives Face coverings are mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. [UNLV public health directives](https://www.unlv.edu/coronavirus/health-requirements) are found at <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the [UNLV Code of Student Conduct](https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf), https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

Academic Misconduct Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the [Student Conduct Code](https://www.unlv.edu/studentconduct/student-conduct), <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing Classes Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or potentially disruptive devices or activities are only permitted with the prior explicit consent of the instructor. The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course.

Copyright The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional [copyright policy information](https://www.unlv.edu/provost/copyright) is available at <https://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC) The [UNLV Disability Resource Center](https://www.unlv.edu/drc) (SSC-A, Room 143, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours, so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the

course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

Final Examinations The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the [Final Exam Schedule](https://www.unlv.edu/registrar/calendars), <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the [Student Academic Misconduct Policy](https://www.unlv.edu/studentconduct/misconduct/policy), <https://www.unlv.edu/studentconduct/misconduct/policy>, which states that “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the [Acceptable Use of Computing and Information Technology Resources Policy](https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy), <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the [Libraries’ Research Consultation](https://guides.library.unlv.edu/appointments/librarian) website, <https://guides.library.unlv.edu/appointments/librarian>. You can also [ask the library staff](https://ask.library.unlv.edu/) questions via chat and text message at <https://ask.library.unlv.edu/>.

Missed Classwork Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses,

of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Work policy, under Registration Policies, on the [Academic Policies](https://catalog.unlv.edu/content.php?catoid=29&navoid=7326) webpage, <https://catalog.unlv.edu/content.php?catoid=29&navoid=7326>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail Rebelmail is UNLV’s official email system for students and by University policy, instructors and staff should only send emails to students’ Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Emailing within WebCampus-Canvas is also acceptable.

Tutoring and Coaching The Academic Success Center (ASC) provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the [ASC website](https://www.unlv.edu/asc), <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center One-on-one or small group assistance with writing is available free of charge to UNLV students at the [Writing Center](https://writingcenter.unlv.edu/), <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3–301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Diversity Statement As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see [University Statements and Compliance](https://www.unlv.edu/about/statements-compliance), <https://www.unlv.edu/about/statements-compliance>.

A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.