IS 489 - Business Intelligence II

Department of	Management, Entrepreneurship, and Technology
College of	Lee Business School
Course Location:	CBC C125
Class Meeting Days & Times:	F 2:30 P.M. – 5:15 P.M.
Course Abbreviation/ Number/ Section	IS 489 (Business Intelligence II); course number: 88399
Prerequisites:	Admission to a business major/junior standing, IS 383
Required Text:	• **Business Intelligence and Analytics: Systems for Decision Support, 10/e** **Sharda, Delen & Turban** (referred to as SDT henceforth) ©2015 | Prentice Hall | Cloth; 688 pp | Available ISBN-10: 0133050904 | ISBN-13: 9780133050905 • **Leada student subscription https://www.teamleada.com/ (need to purchase)** • **Data Mining for the Masses by Mathew North** (referred to as MN henceforth) **(**NOTE: You **do not** have to buy this book. It is freely available on webcampus) • **Other materials may be assigned as required**
Access to Learning Resources:	• UNLV Library: phone: (702) 895-2286; web: http://library.nevada.edu/ • University Bookstore: phone: (702)736-3955; web:http://unlv.bncollege.com/webapp/wcs/stores/servlet/BNCBHomePage?storeId=19074&catalogId=10001 • Teradata Student Network: http://www.teradatastudentnetwork.com o Register using the student password: **DataDive**

Course Overview:

Skills, technologies, applications, and practices to leverage the organizations' internal and external information assets for making intelligent business decisions in data-rich organizations. This course illuminates the relevance of information technology (IT) in organizational problem solving and/or decision making. Topics include decision making, decision support systems, text/data mining, data warehousing, and business performance management.

Learning Outcomes of this course

At the end of this course, the student will:

1	Understand the criticality of human decision making and business intelligence to today's business organizations
2	Understand basic concepts/technologies/techniques underlying business intelligence and human/organizational decision making
3	Apply/Implement business intelligence concepts using one or more tool(s).

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Item	Value (points)	Individual/Group
2 Exams at 100 points each	200 points	Individual
3 Quizzes at 50 points each	150 points	Individual
4 Class Assignments at 25 points each	100 points	Individual
Group Term Project	100 points	Group
Total:	**550 points**	

Grade Determination:

A (≥ 93%)	A- (90-92.99%)	B+ (87-89.99%)	B (83-86.99%)
B- (80-82.99%)	C+ (76-79.99%)	C (72-75.99%)	C- (70-71.99%)
D+ (66-68.99%)	D (62-65.99%)	D- (60-61.99%)	F (< 60%)

Note: Final decimal percentages will be rounded off to the <u>nearest</u> integer before calculating the letter grades. For example, if the final course percentage is 92.8, it will be rounded off to 93% and the student will receive an A. Again, if the final course percentage is 92.2, it will be rounded off to 92% and the student will receive an A-.

Course Procedures

Web Campus

The course shall use webcampus portal. This portal will have the resources related to the course, e.g. powerpoints, reading materials, posted syllabus, assignments etc.

You will be required to log in into this portal to access your course.

Groups

- For the group project, you will work in groups of max 4 members.
- You should choose groups and notify the instructor regarding your group by the **date noted in the course schedule**. However, the instructor reserves the right to re-assign you to a different group.
- Once groups are chosen, they cannot be changed without the instructor's permission.
- Please make sure you are aware of your groups and your group members.

Class Attendance and Quizzes/Assignments

- Class attendance is important and will be a critical factor for doing well in this course.
- There shall be class assignments/quizzes (see course calendar) that will be assigned, completed, and submitted during regular class hours and/or on the same day as classes.
- All class assignments/quizzes are individual
- If you miss a class assignment/quiz, you will need to provide a **valid and documented** excuse to make up, similar to the exam policy noted below.
- If you do not provide a valid excuse with proper documentation, you will not be able to get credit and/or make up the missed assignment/quiz.

Quizzes

- Quizzes will typically be multiple choice/true-false/fill in the blank.
- They are closed book and notes
- They are in-class

Assignments

- Assignments are in class.
- They are individual
- You can consult resources while doing the assignments

Exams and Exam Policy

There are 2 exams: 1 mid-term and the final. All scheduled exams will be taken on computers in the classroom.

- The exams are closed books and closed notes.
- Exams may have MULTIPLE-CHOICE/TRUE FALSE/FILL IN THE BLANK questions, OPEN ENDED ESSAY-TYPE questions, as also hands-on assignment questions (or any combination of these)
- Examinations will be administered during the scheduled days (please check course calendar) in class via webcampus.
- All exams are individual components.

Do not miss any exam. ***If you miss an exam without a valid excuse, then your grade in that exam will be zero***. If an exam is missed, it is the student's responsibility to (a) contact the professor as soon as possible via email, telephone or in person, (b) produce a document describing the valid reason for having missed the exam. Examples of valid excuses are serious illness and participation in University sponsored events. If you miss an exam due to illness, a written excuse from a doctor is necessary. When you have to miss an exam due to participation in a University sponsored event, you must inform me prior to the exam and submit appropriate documentation to verify your claim. When you miss an exam for a valid reason, contact your professor with **valid documentation** within 7 days of the missed test. ***No makeup exams are ordinarily given.***

Group Term Project

- The Term Project is a group-based assignment.
- Grading is team-based for this assignment.

- Full points for this project would be 100.

The term project would involve submitting to the "**Syngenta Crop Challenge in Analytics**". I believe this will be an excellent experience, with real life data, and could be a good addition to your CV, especially if you win!
- For details, see https://www.ideaconnection.com/syngenta-crop-challenge/. This website includes, among others,
  - The data sets you will need
  - The <u>research question</u> that you will need to answer: **"Which soybean seed variety, or mix of up to five varieties with corresponding proportions, are more likely to be chosen by farmers in a growing region?"**
  - Submission instructions
  - Dates/deadlines
- NOTE: the actual conference where you will present (if selected) is in <u>Las Vegas in April 2-4, 2017</u>, so there is no need to travel!
- These conferences often have potential industry speakers/ recruiters, so it is an excellent networking event.
- NOTE: the submission deadline for the Syngenta Challenge is Jan 2017, however, since our semester gets over in <u>December</u>, you will have to submit **by Friday December 9, 2016** for me to give you a grade. This is the last day of class.
  - You will submit a version on Webcampus and also submit one to the Syngenta Challenge, as per their submission instructions.
  - If you want, you can continue to refine it over the Christmas break and submit a newer version to them. But that would be outside of the grading for this class. What I am concerned with (for grading) is that you submit a version to me and a copy of that version to Syngenta Challenge, so that we have an entry for the submission.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the campus community; 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 when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution.

An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: https://www.unlv.edu/studentconduct/student-conduct.

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 information can be found at: http://www.unlv.edu/provost/copyright.

Transparency in Learning and Teaching

The University encourages application of the transparency method of constructing assignments for student success. Please see these two links for further information:
https://www.unlv.edu/provost/teachingandlearning

https://www.unlv.edu/provost/transparency

Disability Resource Center

The UNLV Disability Resource Center (SSC-A 143, http://drc.unlv.edu/, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with a Disabilities Specialist at the DRC to 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.

Religious Holidays Policy

Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor **within** the first 14 calendar days of the course for fall and spring courses (excepting modular courses), or **within** the first 7 calendar days of the course for summer and modular courses**,** of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: http://catalog.unlv.edu/content.php?catoid=6&navoid=531.

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, visit http://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 the SSC (ASC Coaching Spot). Drop-in tutoring is located on the second floor of the Lied Library and College of Engineering TEB second floor.
Incomplete Grades
The grade of I—Incomplete—can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate courses. 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 time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an Incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.
Library
Students may consult with a librarian on research needs. For this class, the subject librarian is https://www.library.unlv.edu/contact/librarians_by_subject. UNLV Libraries provides resources to support students' access to information. Discovery, access, and use of information are vital skills for academic work and for successful post-college life. Access library resources and ask questions at https://www.library.unlv.edu/.
Rebelmail
By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. **Emailing within WebCampus is acceptable.**
UNLV Writing Center
One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: http://writingcenter.unlv.edu/.
Final Examinations
The University requires that final exams given at the end of a course occur at the time and on the day specified in the final exam schedule. See the schedule at: http://www.unlv.edu/registrar/calendars.

Course Calendar: May be updated based on our progress in the class

WK	Date	Topic	Assignments/quizzes
		Background and Theory	
1	Sep 2	Introduction and Syllabus; SDT Chapter 1: Overview of Business Intelligence, Analytics, and Decision Support	
2	Sep 9	SDT Chapter 2: Foundations and Technologies for Decision Making	**Quiz 1**
3	Sep 16	SDT Chapter 4: Business Reporting, Visual Analytics, and Business Performance Management	
		Analytics and SQL	
4	Sep 23	SQL Open Lab: Introducing SQL & SQL-1 (basics in SQL, including Database, Tables, Data Types, Queries etc.)	**Quiz 2**
5	Sep 30	SQL Open Lab: SQL-2 (More advanced topics such as Aggregate Functions, Subqueries, Advanced Joins etc)	
6	Oct 7	SQL Open Lab: Practice Problems	**Assignment 1**
7	Oct 14	SQL Open Lab: Hands on project	**Assignment 2**
8	Oct 21	**EXAM 1**	
		Data Mining	
9	**Oct 28**	**Holiday: Nevada Day Recess**	
	Nov 4	Data Mining Basics SDT Chapter 5/7: Data and Text Mining MN Chapter 1, 2 &3: Intro to Data Mining and CRISP-DM, Organizational Understanding and Data Understanding, Data Preparation	
11	**Nov 11**	Holiday: Veteran's Day Recess	**Quiz 3**
12	Nov 18	Data Mining: MN Chapter 4&5: Correlation and Association	**Assignment 3**
13	**Nov 25**	Data Mining: MN Chapter 6&7: K-Means Clustering and Discriminant Analysis	
14	Dec 2	Data Mining: MN Chapter 8&9: Linear Regression and Logistic Regression	**Assignment 4**
15	Dec 9	Data Mining: MN Chapter 10&11: Decision Trees and Neural Networks	**Term Project Due**
16	**Dec 16**	**FINAL EXAM : SAME AS CLASS TIME**	