ISM 3116 - 001
CRN: xxxxx
Introduction to Business Analytics and Big Data
Spring 2017
FL 411
Tuesday 11:00 am-1:50 pm

COURSE LOGISTICS

Professor Information
Instructor: Dr. Jahyun Goo
Office: FL 218, Boca Campus
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Office Hours
T 2:00 pm ~ 4:00 pm or by appointment

Required Text and Materials
Lecture:
- Business Intelligence: A Managerial Approach, 3rd edition by Sharda, Delen, and Turban, Prentice Hall, 2011, ISBN: 9780133051056

Lab:
- Problem-Solving Cases in Microsoft Access and Excel by Monk, Brady, Cook, & Mendelsohn, 13th Annual Edition, Cengage Learning, 2015, ISBN: 9781305408722

Course Description
This course provides an understanding of the business intelligence and business analytics processes and techniques used in transforming data to knowledge and value in organizations. Students also develop skills in analyzing data using generally available tools (e.g., Excel).

Course Prerequisites and Credit Hours
This course is 3-credit and serves as a core/required course for the Business Analytics concentration. This course has a prerequisite of ISM 3011 (Management Information Systems).

Class Time Commitments
According to Florida Administrative Code, Rule 6A-10.033, students must spend a minimum 2,250 minutes of in-class time during a 3-credit course. Additionally, students enrolled in a 3-credit course are expected to spend a minimum of 4,500 minutes of out-of-class-time

specifically working on course-related activities (i.e., reading assigned pieces, completing homework, preparing for exams and other assessments, reviewing class notes, etc.) and fulfilling any other class activities or duties as required. The course schedule for this course reflects this expectation of students.

Supplemental Course Description

This course expects a working knowledge of basic mathematics (high school algebra), and the ability to use simple computing tools (e.g., passing familiarity with EXCEL and ACCESS). Students should have access to EXCEL spreadsheet and ACCESS database software (comes with Microsoft Office). The students are assumed to be familiar at an intuitive level with general business practices of collecting, storing, and using data. However, these subjects will be reviewed in detail at the beginning of the course as a refresher for students who may have forgotten some of the details.

Course Learning Objectives

Many organizations have a wealth of data residing in their databases, and generate additional valuable data that is often not captured. Business intelligence (BI) is the process of collecting and turning this resource into business value. The class format consists of discussion of a large number of articles/cases, presentations by business professionals, class lectures and discussions on data modeling and design, and hands-on work with Excel. The Learning Outcomes for this course are the following:

- Fundamental concepts about business intelligence such as use data analysis techniques to make better business decisions, data preparation and simple tools for solving data mining problems.
- Communications skills by writing an executive memorandum that presents the business problem and analytical technique used, the summary of the results in terms of actionable information, and the recommendation for decision making.
- Critical thinking that analyzes the results, estimate the errors, costs, and accuracy of the model, evaluate the technique effectiveness
- Critical thinking to answer a business question or solve a business problem by: choosing the most appropriate data and analytical techniques, and by offering the recommendation for decision making

COURSE COMPONENTS

Grading Scale

My grading philosophy is that professors do not "give" grades. Students "earn" grades. I take grading *very seriously.* I *thoughtfully* grade each assessment item on the assessment sheets. I am morally obligated to clearly define expectations (which I do on a very detailed syllabus and

detailed assignments), to help you as much as I can before your assignments are due, and to grade the actual performance using the assessment sheets. All that said, I have great empathy for college students, having been one myself for nine years! I care about your learning. No one would be happier than I to see all students *earn* high grades! In this class, the letter grades use the following scale on the total point earned from a multitude of assessments:

Grades are rounded up to the nearest tenth of a point.

Grade Percentage Breakdown	
Mid-term Exam I, II	25%
Final Exam	30%
Lab Exam	20%
Lab Assignments	20%
Quiz & Participation	5%
Total	**100%**

Final Grade Assignment		
A	100	– 93.00
A-	92.99	– 89.00
B+	88.99	– 87.00
B	86.99	– 83.00
B-	82.99	– 79.00
C+	78.99	– 77.00
C	76.99	– 73.00
C-	72.99	– 69.00
D+	68.99	– 67.00
D	66.99	– 63.00
D-	62.99	– 59.00
F	58.99	– 0.00

Because everyone will be graded in exactly the same way, in fairness of other students, the instructor cannot and will not arbitrarily move the grading scale to accommodate individuals' specific needs or desires. All requests for an unearned extra or "bonus" point at the end of the semester in order to move you into the next grade category will be rejected.

CLASS PARTICIPATION

During the lectures, frequent discussions of concepts and applications are expected in class. Regular attendance and active participation are essential part of learning in this course, and you may be called upon to share your ideas, experience, or educated opinions. Therefore, it is advised that you come to each class having read (or at least scanned) the assigned materials. To assist your preparation, lecture note for each class is posted on Blackboard.

Although regular roll calls will not be administered, attendance will be taken randomly and unannounced in class. Please note that those come to class more than 30 minutes late will not be allowed to sign in. The attendance record can affect your grade as follows:

- Those who are recorded absent two (2) times will get *at most* a B+;
- Those who are recorded absent three (3) times will get *at most* a C+;
- Those who are recorded absent four (4) times or more will get *at most* a C-.

The class takes place in the computer lab as the course involves case studies with the Excel and Access used. Please note that **lecture time is not meant to be used to check your email, watch YouTube videos, update Facebook, or work on your assignments for this or any other class**.

LECTURE SESSION

Lecture Exams

Three (3) lecture exams will be administered throughout the semester (see Course Schedule). Exams will be given in a multiple-choice format. They are comprehensive, covering all the assigned reading and lecture notes, but non-accumulative. Note that material presented in class will supplement the assigned reading. Therefore, class attendance and good note taking are essential tactics for success.

All three exams are online. I will expand more on your online exams in the next paragraph. Following the online exam guidelines by the college, your final exam will be held in class. Thus, following the university final exam schedule, your **final online exam** will take place **from 10:30 am (not 11am) to 1 pm on the 13th of December (Tuesday)**.

Online Exam:
Because I will base off of the assumption that the online exam is open book, each exam on the blackboard will be managed by a certain time limit. That is, you won't have enough time to finish your exam when you study and search for the answers during the exam period. So it would be mistaken if you think you can and thus start taking your exam with such plan. I strongly recommend you to avoid falling into the trap of doing such. Instead, be fully prepared before you begin to take your online exam. Please know that the time management is one of critical pieces for succeeding in your short, timed online exams and is your responsibility.

To prevent students from printing, copying, going to another URL, or accessing other applications during an assessment, I have set up online exams in Blackboard that requires **LockDown Browser** to be used. LockDown Browser is a customized web browser so that the exam won't be accessible with a standard web browser such as Internet Explorer, Firefox or Safari. Instead, you must use a computer that has the LockDown Browser software installed,

and when you launch it you will be taken directly to FAU's Blackboard login page to access and complete the test. Once you begin the online exam, you will be locked into it until you submit it for grading.

The LockDown Browser software has been installed in most FAU instructional and open labs. Students wishing to take an exam from their own computer must first install the LockDown Browser software (go to the following URL for the installation guides and downloading the software: http://www.fau.edu/oit/blackboard/lockdown_browser.php#installation).

A practice exam has been offered under the Lecture Exam section of BB, which hopes to help familiarize yourself with the LockDown Browser software before actually taking your first online exam. This practice exam will offer you five bonus points to your first online exam score once successfully finished before the first online exam.

There are no make-up exams for this course. However, if you are unable to take an exam due to an emergency, you must inform the instructor of that fact **on or before** the day of the exam and arrange for a make-up to be administered before the graded exam is returned to the class. Any student requiring a make-up has to document his/her excuse (e.g., a letter from a physician written on the physician's letterhead). Please note that *in no event will a make-up test be given after the graded exam is reported to the class*.

Lecture Pop Quizzes
Several pop quizzes may be planned over the semester, if necessary**.**

LAB SESSIONS
Lab Class
Lab classes are designed to understand the conducts of business analysis using Excel and Access. Always bring the appropriate text and (if applicable to you) file transfer means, such as a thumb drive, to lab**.** You are expected to finish any cases (except tutorials) not finished in class on your own, so that you are prepared for the next lab's lesson. Please note that **lab time is not meant to be used to check your email, watch YouTube videos, update Facebook, or work on your assignments for this or any other class**.

Lab Exams
There is one (1) exam administered in the lab (see Course Schedule). It is the case analysis to be finished during the lab exam period. If you are unable to take an exam due to an emergency, you must inform the instructor of that fact **before** the day of the exam and arrange for a make-up, preferably to be administered before the next class; ***in no event will a make-up test be***

given after the lab exam is administered. Any student requiring a make-up has to document his/her excuse (e.g., a letter from a physician written on the physician's letterhead).

Lab Assignments

Individuals will apply what they learned during the lecture class to the cases given along with data throughout the lab sessions. Please download the data files you will be working with the cases from the blackboard under Course Documents>Lab: Cases.

Although learning expected to occur individually, working and learning together is allowed and encouraged in order to effectively tackle the lab cases. Thus, they are all group projects; ***Group submission is required***. Students are asked to submit a **summarized report of the analysis as a group** using a memorandum template available in word document, along with an Excel file created during the case analysis. All deliverables must be submitted via email as attachment. Please refer to "Submission Guidelines" below for detail.

No assignments will be graded because of one's failure to follow instructions, including, but not limited to, not having everything required or submitting the wrong file. The due date of each case is a week after the last session of each case as scheduled in the course outline unless mentioned otherwise. Because you will have one more week to work on each case after the official closure, ***late assignment will not be accepted—no exception***!

General Submission Guidelines
1. ***Due Date***. All assignments are due before class on the due date indicated in the course outlines.
2. ***Email Submission***. All assignments are to be submitted to the instructor via email. Since every assignment the instructor receives will have an acknowledgement sent, you will want to be sure that an acknowledgement from the instructor for each assignment is arrived, and keep it till the end of the term as a receipt. If you did not get the acknowledgment, it should be assumed that the instructor did not get the assignment, and thus try to resubmit. All email submissions must be received prior to the stated deadline.
3. ***Format of Submission***. The following format must be used when submitting assignments via email. In the "Subject" line of your email must indicate the followings: ISM3116-Section# YourName NameOfDeliverable (Example: *ISM3116-Sec1 John Doe Case 6)*. In the "main text" of your email, please list the names of your group members.

SELECTED UNIVERSITY AND COLLEGE POLICIES

Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty.

For more information, please see FAU Regulation 4.001 at: FAU Regulation 4.001

Disability/Accessibility Policy Statement

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS)—in Boca Raton, SU 133 (561-297-3880); in Davie, LA 131 (954-236-1222); or in Jupiter, SR 110 (561-799-8585) —and follow all SAS procedures. Their web site is: https://fau.edu/sas.

Religious Observance Accommodation

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices, observances, and beliefs with regard to admissions, registration, class attendance and the scheduling of examinations and work assignments.

For further information, please see FAU Regulation 2.007 at: FAU Regulation 2.007.

University Approved Absence Policy Statement

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is the student's responsibility to notify the course instructor at least one week prior to missing any course assignment.

Incomplete Grade Policy Statement

A student who is passing a course, but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor, but is allowed only if the student is passing the course.

The specific time required to make up an incomplete grade is at the discretion of the instructor. However, the College of Business policy on the resolution of incomplete grades requires that all work required to satisfy an incomplete ("I") grade must be completed within a period of time not exceeding one calendar year from the assignment of the incomplete grade. After one calendar year, the incomplete grade automatically becomes a failing ("F") grade.

Withdrawals

Any student who decides to drop is responsible for completing the proper process required to withdraw from the course.

Grade Appeal Process

A student may request a review of the final course grade when s/he believes that one of the following conditions apply:

- There was a computational or recording error in the grading.
- Non-academic criteria were applied in the grading process.
- There was a gross violation of the instructor's own grading system.

The procedures for a grade appeal may be found in FAU Regulation 4.002.

Disruptive Behavior Policy Statement

Disruptive behavior is defined in the FAU Student Code of Conduct as *"... activities which interfere with the educational mission within classroom."* Students who behave in the classroom such that the educational experiences of other students and/or the instructor's course objectives are disrupted are subject to disciplinary action. Such behavior impedes students' ability to learn or an instructor's ability to teach. Disruptive behavior may include, but is not limited to: non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct.

Faculty Rights and Responsibilities

Florida Atlantic University respects the right of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions which do not impede their exercise. To ensure these rights, faculty members have the prerogative:

- To establish and implement academic standards
- To establish and enforce reasonable behavior standards in each class
- To refer disciplinary action to those students whose behavior may be judged to be disruptive under the Student Code of Conduct.

Course Outline

Week	Lecture			Lab	
	Date	Topic	Reading	Topic	Case Assignment
1	8/23	Syllabus & Overview			
2	8/30	Introduction	Ch. 1	Excel for data analysis (1)	Case 10
3	9/6	Data warehousing I	Ch. 2	Excel for data analysis (2)	Case 10
4	9/13	Guest Speaker; Data warehousing II	Ch. 2		
5	9/20	MIDTERM EXAM I (Online: 11:00am ~ 1:50pm)			
6	9/27	Business analytics with OLAP, and visualization	Ch. 3	Decision making with Solver (1)	Cases 8
7	10/4	Business performance monitoring and dashboards	Ch. 3	Decision making with Solver (2)	Cases 8
8	10/11	Fall Break (NO CLASS)			
9	10/18	Emerging BA technologies and Challenges	Ch. 7	Visual Analytics with Tableau (1)	
10	10/25	MIDTERM EXAM II (Online: 11:00am ~ 1:50pm)			
11	11/1	Data mining: concept, business applications, and managerial issues	Ch. 4	Visual Analytics with Tableau (2)	
12	11/8	Text and web mining concept and business applications	Ch. 5	Visual Analytics with Tableau (3)	
13	11/15	Big Data and Analytics	Ch. 6	Decision making with Scenario Manager (1)	Cases 7
14	11/22	Big Data and Analytics	Ch. 7	Decision making with Scenario Manager (2)	Cases 7
15	11/29			Decision making with Scenario Manager (3)	Cases 7
16	12/6	LAB EXAM (In-Class)			
17	12/13	FINAL EXAM (Online: 10:30am ~ 1:00pm)			

Note: The course outline is subject to change, depending on class pace and needs.
    The instructor reserves the rights to make any changes needed.
    Students are responsible for being familiar with any revisions even if they were absent from the class on the days changes were announced.

BIBLIOGRAPHY

Books
Title: Decision Support and Business Intelligence Systems
Authors: Afraim Turban, Jay E. Aronson, Ting-Peng Liang, & Ramesh Sharda
ISBN: 0-13-198660-0
Publisher: Prentice Hall

Title: Decision Support Systems in the 21st Century, 2nd edition
Author: George M. Marakas
ISBN: 0-13-092206-4
Publisher: Prentice Hall

Title: Excel Basics to Blackbelt
Author: Elliot Bendoly
ISBN: 978-0-521-88905-6
Publisher: Cambridge University Press

Title: Modern Data Warehousing, Mining, and Visualization
Authors: George M. Marakas
ISBN: 0-13-101459-5
Publisher: Prentice Hall

Title: Mining the Talk: Unlocking the Business Value in Unstructured Information
Authors: Scott Spangler and Jeffrey Kreulen
ISBN: 0-13-233953-6
Publisher: IBM Press

Title: Data and Text Mining: A Business Applications Approach
Authors: Thomas W. Miller
ISBN: 0-13-140085-1
Publisher: Prentice Hall

Title: Introduction to Data Mining
Authors: Pang-Ning Tan, Michael Steinbach, and Vipin Kumar
ISBN: 0-321-32136-7
Publisher: Addison Wesley

Title: Introduction to Business Data Mining
Authors: David Olson and Yong Shi

Articles

Anonymous, 2008. "Technology (a Special Report); Business Solutions: Finding the Gems, Protecting the Jewels," in: *Wall Street Journal*. p. 6.

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