

**MBAD6201-U90/DSBA 6201 – U90
Business Intelligence and Analytics
Spring 2020**

INSTRUCTOR: Dr. Sungjune Park

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OFFICE HOURS: Tue 11:45 am – 1:00 pm & 3:45 pm – 5:30 pm, and by
appointment

CLASS HOURS: Tue 5:30 pm - 8:15pm, Center City Building 601

COURSE DESCRIPTION

An overview of the business approach to identifying, modeling, retrieving, sharing, and evaluating an enterprise's data and knowledge assets. Focuses on the understanding of data and knowledge management, data warehousing, data mining (including rule-based systems, decision trees, neural networks, etc.), and other business intelligence concepts. Covers the organizational, technological and management perspectives.

Prerequisites: MBAD 5121 or equivalent.

LEARNING OBJECTIVES

Business intelligence (BI) is a broad category of applications and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions. BI applications include the activities of decision support systems, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining. The learning objectives of the course are thus:

1. To understand the role of business intelligence and analytics in today's competitive and turbulent business environment.
2. To be familiar with the terminology of the field, basic principles, and concepts of business intelligence and analytics.
3. To learn how to use and apply key methods for analytics (e.g., regression, decision trees, clustering, and association rule).
4. To use a range of tools (e.g., R, SAS Enterprise Guide/Enterprise Miner, IBM SPSS Modeler) appropriate for data analytics problems.

COURSE MATERIALS

- Handouts, slides, assignments, and online resources will be posted on Canvas.

- **Textbook:** There are no required textbooks as students will be provided with enough materials for each topic on Canvas. But, recommended texts are as follows:
 - *An Introduction to Statistical Learning: with Applications in R* by James, Witten, Hastie, and Tibshirani, ISBN-13: 978-1461471370
 - *Data Science for Business: What you need to know about data mining and data-analytic thinking* by Provost and Fawcett, ISBN-13: 978-1449361327
 - *Data mining: concepts and techniques* by Jiawei Han, Micheline Kamber, and Jian Pei. Elsevier, 2011, ISBN-13: 978-0123814791
- A scientific calculator that can do exponential and log calculations.

GRADING

Component	Points
Exams (2)	60
Assignments (5)	35
Class Participation/Attendance	5
Total	100

Final grades will be based on the following scale.

A: 90 and above, B: 80-89.9, C: 70-79.9, U: 69.9 and below.

EXAMS

An opportunity to take an early or make-up exam is given to a student only if he/she provides legitimate and documented reasons. Permission must be obtained from the professor before the scheduled exam time. The format of make-up exams may differ from the format of the regularly scheduled exam.

Exams are **closed** book and notes when they are administered in class. The instructor will keep all exams. However, exam reviews are available during office hours or by appointment for 10 days after exam grades are posted. All exam grades will be posted on Canvas.

ASSIGNMENTS

Assignments will be posted at the end of the class at least a week before they are due. Solutions must be provided via Canvas only. Detailed information on assignments' tasks and expected work will be given with each assignment. Assignments are due on the given day with the start of class (5:30 pm) unless stated otherwise. In the case of a late submission on the same day, 20% of the points earned from the submission will be deducted. After the due date, the late homework may be accepted, but with a 50% penalty. Once the grade is posted or a week has passed after due date, whichever comes first, you will receive a 0 for the late assignment.

Each student must develop his or her own solutions to the assigned homework. Students may not "work together" on homework assignments. Such collaboration constitutes cheating unless it is a group assignment. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own.

ATTENDANCE POLICY

Students are expected to attend all classes. Attendance will be taken at each class, and unexcused absences will result in zero participation point. Therefore, you must inform me ahead of time of your expected absence, tardiness, or early departure. Tardiness or early departure is highly disruptive and is strongly discouraged in my class.

Consistent class attendance is a strong predictor of academic success. If you earn an F or U grade, your last date of attendance will be reported. This may require you to pay back any financial aid money received for this course.

CLASS CONDUCT

Disruptive behavior in class distracts from the ability of others to profit from their in-class experience. Such disruptive behavior includes arriving late, leaving early, cell-phone interruptions, checking e-mail, surfing the net during the class, spending class time working on assignments for other classes, side conversations between two or more students during lecture, unnecessary comments that add no value to class, and any activities that negatively impact the ability of other students to learn and/or listen in class. Such behavior will be considered rude and inappropriate and will not be tolerated.

Students are permitted to use computers or tablets during class for **note-taking and other class-related work only**, but this should be done without distracting other students and without distracting you from the topic of discussion. Those using computers during class for work not related to that class must leave the classroom for the remainder of the class period.

ACADEMIC INTEGRITY

All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code is available from the Dean of Students Office or online at <https://legal.uncc.edu/policies/up-407>

GRADE APPEALS

If you believe that the grade you received on an assignment, exam or other graded course component was in error or unfair, you can appeal to the professor in writing within 10 calendar days of the receipt of your grade. The appeal should clearly state the

reasons why you believe the grade to be unfair or the nature of the error. Overdue appeals will not be considered.

INCOMPLETE GRADE POLICY

The incomplete is not based solely on a student's failure to complete work or as a means of raising his/her grade by doing additional work after the grade report time. An incomplete grade can be given when a student has a serious medical problem or other extenuating circumstance that legitimately prevents completion of required work by the due date. In any cases, the student's work to date should be passing, and the student should provide proper written proof (e.g., a doctor's note), in order to get an 'I' grade.

DISABILITY ACCOMMODATIONS

UNC Charlotte is committed to access to education. Students in this course seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations. Contact the Office of Disability Services at 704-687-0040 or visit their office in Fretwell 230.

COURSE SCHEDULE

The Instructor reserves the right to change the course contents and schedule. The up-to-date course schedule is available on **Canvas**. Important announcements, specific policies regarding exams, etc. are also available on Canvas. It is the student's responsibility to be aware of any changes in the course schedule, course contents, and course policies by visiting Canvas regularly.

The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

Tentative schedule

Date	Topic	Due Dates
Jan 14	Introduction Business Intelligence and Analytics Overview Analytics tools (R and SAS)	
21	A short introduction of R Statistics Review	
28	Regression	
Feb 4	More on Regression	
11	Data Warehousing	Regression Assignment
18	Classification - Logistic Regression, Naive Bayesian, kNN, LDA, ...	Data Warehouse Assignment
25	Classification - Model Evaluation	
Mar 3	Spring Recess – No class	
Mar 10	Exam 1	
17	ROC / Decision Trees	
24	Decision Trees	ROC Assignment
Mar 31	Clustering	Decision Tree Assignment
Apr 7	Clustering / Association Rule Mining	
14	Association Rule Mining	Clustering Assignment
21	Neural Networks / Text Mining	Association Rule Assignment
28	Exam 2	
May 5	Comprehensive Final Exam (optional)	