



UNC CHARLOTTE
BELK COLLEGE *of* BUSINESS
INFO 3236 – 001 Business Analytics
Course Syllabus – Spring 2021

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Office Hours: Mon. and Wed. 10:30 am – 11:15 am only on Zoom
Join Zoom Meeting
<https://uncc.zoom.us/j/95206208734?pwd=RVVMYnllcEFETGZ1YVlhQlI3cXJUUT09>
Meeting ID: 952 0620 8734 Passcode: 637236
Office Location: Friday Building, Room# 353A
Additional time available by appointment

Course Materials: **Reading Materials:** There is no required text book for this class. All reading materials will be posted or linked on Canvas course site. These materials include handouts, notes, power-point slides, practice problem sets, and web links to articles for class discussions. You can print the posted material and bring them to class. Please note that I will not provide printed copies of any of the posted materials.

Software: This class will primarily use SAS Enterprise Guide and SAS Enterprise Miner Workstation (both available when you install SAS 9.4). We may also use Microsoft Excel 2013/2016, depending on time available during the semester. Another software we will explore in this course is named Tableau. We will use it for visualization of data. **The SAS, Excel and Tableau software are available by accessing a cloud-based virtual desktop – Apporto.** You can also install some of these softwares on your personal laptop or home desktop by contacting the Atkins library for installation instructions. You will be able to download a trial license for Tableau during the semester.

Course materials including copies of presentations will be provided on the Course Canvas website at: <https://canvas.uncc.edu>

Syllabus: This syllabus contains the policies and expectations the instructor has established for this course. Please read the entire syllabus carefully before continuing in this course. These policies and expectations are intended to create a productive learning atmosphere for all students. Unless you are prepared to abide by these policies and expectations, you risk losing the opportunity to participate further in the course.

Instructor may make minor modification to the standards and requirements set forth in this syllabus at any time. Notice of such changes will be by announcement in the class and/or by changes to this syllabus posted on the Course Canvas website.

Course Description: **Catalog Description:** This course covers various data mining and business intelligence methods, such as rule-based systems, decision trees, and logistic regression. In addition, this course covers query and reporting, online analytical processing (OLAP) and statistical analysis as well as issues relating to modeling, storing, securing, and sharing the organizational data resources.

Prerequisite: Junior or Senior standing; and MIS, OSCM, Economics, or Marketing major or minor in good standing; or permission of department.

Course Learning Objectives:

As we transition from an industrial to knowledge economy, an organization's ability to create and successfully leverage data and knowledge assets will be an important competitive factor. Increasingly organizations are faced with the challenges of "Big Data" and how to effectively use the data for competitive advantage. "Business analytics" refers to the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions (Davenport and Harris, 2007, *Competing on Analytics: The New Science of Winning*). This class will provide the conceptual foundations of business analytics and an overview of select analytics techniques and software tools.

The specific learning objective are as follows:

1. To develop an understanding of the business intelligence, analytics and decision support.
 2. To understand the principles of data management in a "big data" environment, including the issues relating to storing and organizing organizational data resources using data warehousing.
 3. To understand different data mining and analytics tools and techniques (e.g., decision trees, logistic regression, cluster analysis, etc.) for solving business problems.
 4. To understand how to effectively use reporting and visual analytics tools to present analytics results to a business audience.
 5. To understand the ethical and privacy issues when practicing business analytics.
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Canvas Course Website:

You are required to regularly access the Canvas Course website and, in particular, before each class. In addition to containing helpful information and course materials, Canvas course website will be used to communicate information on assignments, changes to syllabus, and other announcements of general interest.

On-line Course:

Please be aware that this course will be delivered completely online in a slightly hybrid format, which means that it will be delivered through a combination of **on-line synchronous class lectures** and **self-study of on-line content**. Topics will be introduced to students online in the form of presentations and supplemental video recordings, while **on-line synchronous** class time will be reserved for review of topic materials, focus on concepts and explanation of algorithms, in-class quizzes, exams, and questions/answers. Students will be expected to self-study posted materials on Canvas prior to each **on-line synchronous class session**. While on-line course format provides increased flexibility to students, they require a commitment to invest additional time and effort outside of scheduled class sessions. The curriculum covered in this course is both conceptual and hands-on applications, thus it is strongly recommended that students continuously read/review the materials related to covered topics and practice assigned problems using required tools.

Grading Policies:

Following letter grades will be used:

A	90.0 – 100%
B	80.0 – 89.99%
C	70.0 – 79.99%
D	60.0 – 69.99%
F	59.99% AND BELOW

Student performance in the course will be weighted as follows:

Grade Components	Points
Exam #1	200
Exam #2	200
Final Exam	200
Group Project	100
Homework	100
On-line Quizzes	100
In-class Quizzes	50
Attendance and Class Participation	50
Total	1000

Exams, Quizzes, Homework, etc.

Examinations:

There will be three exams for the course – 2 midterm exams and one final. All the exams will be non-cumulative. All exams will be on-line, closed book, and closed notes. The exams include multiple-choice questions, essay-type questions, and problem solving with analytics software. The exams will be conducted on-line asynchronously and will have a typical duration of 60-70 minutes.

To take the exam, you will be required to install Respondus Lockdown Browser and/or Monitor which is available from UNCC. Please also review the [Belk College of Business policy regarding Laptop requirement for Upper-Level Students in Business Courses](#).

Exams are a form of intellectual property belonging to those who create them. Consequently, exams must remain in instructor's possession or under instructor's control at all the times. This means that exams may not be taken out of the room or copied from the Canvas site. Students are encouraged to review their exams during office hours or by appointment. However, failure to return an exam after taking or reviewing it or removing an exam from instructor's presence at any time or copying an exam will be considered theft of intellectual property. Such action will result in an exam grade of zero and may warrant further disciplinary action.

Cell phones, smart phones, and smart watches must be silenced and stored away (in purse, bookbag, backpack, pocket, etc.) during exams. Any usage of such during the exam (from the time exam is handed out to departure from the class) will result in a grade of zero for the exam and may warrant further disciplinary action.

Make-up Exam Policy:

There are no separate makeup exams.

Homework Problems:

There are five graded homework assignments. The purpose of homework assignments is to provide learning reinforcement and promote class preparations. You will find that the homework provides excellent feedback on learning and is a confidence-building tool. The assignments will also help with your preparation for the exams. **You are required to follow all the instructions and submit the homework assignments on Canvas course site before the posted deadline.** Solutions to the homework problems will be posted on the Canvas course site. Please study and check each solution carefully.

Quizzes:

There are two types of quizzes in the course.

On-line quizzes: There will be six on-line quizzes. **Each on-line quiz will only be available on the Canvas course website for a specific time period on a given day.** You will use Respondus Lockdown Browser/Monitor to take the quizzes. It is your responsibilities to take note of deadlines and complete the quiz before the deadline. If you miss the deadline, you will get a grade of zero for that quiz. Also, please note that the on-line quizzes are available for exam review only if you attempt the quiz.

In-class quizzes: In-class quizzes will be used to check the on-going understanding of the course materials. Some quizzes will be graded. **In-class quizzes will require the use of Poll Everywhere on your smartphone, tablet, or laptop.** Please make sure that you have one of these devices available all the time during each class. Also, please note that there is no make-up for in-class quizzes. You need to be present in the class to take them.

Poll Everywhere will also be used for tracking class attendance.

Extra Credit Work:

There will be **NO EXTRA CREDIT** work offered for any individual student during the semester. **Please do not depend on any extra credit opportunities to improve your grade later in the semester.**

Class Policies: Class Attendance:

Students must attend all lectures, labs, quizzes, examinations, and presentations and are expected to contribute actively to the class discussions. Class attendance is highly correlated with learning the material and performing well on the course assessments. **Tardiness or early departure are disruptive and are, of course, discouraged.** Note that (1) some topics discussed in the classroom are not covered adequately in the textbook, thus the instructor will present alternative approaches, and (2) historically, those who skip the class tend to make less than their target grades.

Attendance may be taken at any point **during the class (beginning, middle, and end) and may even be checked multiple times. Any attempt to provide attendance electronically, while not physically present in the class will be considered a violation of Academic Integrity Code and will result in further disciplinary action.**

Students will be held responsible for any material covered, announcements made, assignments passed out, and any other type of work that they may miss during any absence from class.

Class Preparation and Participation:

Students are expected to study the textbook and other posted materials (tutorials, notes, videos, presentations, etc.) **prior to each respective class session.** Additionally, students must be prepared to intelligently contribute to active class discussions and answer questions related to the current topics.

Participation refers to: **regular class attendance; contributing positively, constructively, regularly, and significantly to class discussions; being well-prepared for class, as well as the timely and careful completion of assigned homework and exercises by collaborating within your groups, as needed.**

Keep the instructor informed about your absences and any issues regarding class participation, well in time. 80-90% of the class participation grade will reflect your attendance in the class while the remaining 10-20% will be subjectively based on positive class engagement and participation.

Students are expected to be prepared and contribute to the active class discussions.

You will need to have **at least 50% class attendance to qualify for any grade for participation.**

Due Dates Policy:

A homework or assignment with deadline is like a ticket for a cruise. If you arrive after the scheduled departure time, the ship will have sailed without you and your ticket (homework/assignment) will be worthless. **Late homework and projects will not be accepted and will receive a grade of zero.** If you know you will miss a class, make arrangements to turn in your work ahead of time.

Grades Appeals Policy:

If you believe that, the grade you received on an assignment or an exam was in error or unfair, you can appeal to the instructor in writing within **seven calendar days** after the grades are posted. 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.

Class Conduct Policy:

Disruptive behavior in the class distracts from other students' ability to benefit from their in-class experience. Such behavior includes but is not limited to **sidebar conversations between two or more students during lecture**, unnecessary comments that add no value to class, arriving late, leaving early, surfing the net, and any activities that negatively impact the ability of other students to learn and/or listen in the class.

Rude and disruptive behavior will not be tolerated. If necessary, the instructor will deduct points from grades for any student who chooses to disrupt the class and distract others repeatedly. In particularly egregious cases, the instructor will have the student permanently removed from the class.

Under no circumstances will students be permitted to spend their class time working on assignments for other classes, checking email, surfing the Web, texting, or engaging in activities not related to the class. Attempts to engage in such behavior will be reflected in lower grades and may lead to removal from the course.

Electronic Devices in Class:

Use of computing, communication, or other devices during the class time for purposes other than those required for the class is prohibited and may result in being asked to leave the classroom for the remainder of the class period. This includes the use of laptops, lab computers, phones or other devices for Internet browsing, game playing, reading news, emailing, texting, chatting, IM, Facebook, or other activities not required for the class. **Cell phones and other communication devices must be silenced and stored away during class.**

Class Recording:

Electronic video and/or audio recording is **not permitted** during class unless the student obtains permission from the instructor. If permission is granted, any distribution of the recording is prohibited. Students with specific electronic recording accommodations authorized by the Office of Disability Services do not require instructor permission; however, the instructor must be notified of any such accommodation prior to recording. Any distribution of such recordings is prohibited.

Email Policy:

Please use the email address specified for instructor above for electronic communications. When emailing the instructor or graduate assistants, proper subject line must contain your course and section number (Example: OPER 3100-002). Messages missing proper subject lines may be delayed in addressing the question/concern as well as may be deleted for security reasons.

Class Cancellation:

In the event that the instructor is unable to attend class or the University is closed unexpectedly, assume the course material will be moved forward to the next meeting.

Policies Related to COVID-19 Protection:

Face coverings in Classrooms and Labs:

It is the policy of UNC Charlotte for the Spring 2021 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the 49er community. Such behaviors specifically include the requirement that all students properly wear [CDC-compliant face coverings](#) while in buildings including in classrooms and labs. Students are permitted to remove face coverings in classroom or lab settings only when the instructor explicitly grants permission to do so (such as while asking a question, participating in class discussion, or giving a presentation) and while at an appropriate physical distance from others. Failure to comply with this policy in the classroom or lab may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Office of Student Conduct and Academic Integrity for charges under the [Code of Student Responsibility](#).

Policy on Absenteeism During COVID-19:

Students are expected to attend every class and remain in class for the duration of the session when it is safe to do so in accordance with university guidance regarding COVID-19. Failure to attend class or arriving late may impact your ability to achieve course objectives which could affect your course grade. An absence, excused or unexcused, does not relieve a student of any course requirement. Regular class attendance is a student's obligation, as is a responsibility for all the work of class meetings, including tests and written tasks. Any unexcused absence or excessive tardiness may result in a loss of participation points.

Students are encouraged to work directly with their instructors regarding their absence(s). For absences related to COVID-19, please adhere to the following:

- **Complete your [Niner Health Check](#)** each morning.
- **Do not come to class if you are sick.** Please protect your health and the health of others by staying home. Contact your healthcare provider if you believe you are ill.
- **If you are sick:** If you test positive or are evaluated by a healthcare provider for [symptoms of COVID-19](#), [complete this form](#) to alert the University. Representatives from Emergency Management and/or the Student Health Center will follow up with you as necessary, and your instructors will be notified.
- **If you have been exposed** to COVID-19 positive individuals and/or have been notified to self-quarantine due to exposure, [complete this form](#) to alert the University. Representatives from Emergency Management and/or the Student Health Center will follow up with you as necessary, and your instructors will be notified.

To return to class after being absent due to a COVID-19 diagnosis or due to a period of self-quarantine, students should submit an [online request form](#) to Student Assistance and Support Services (SASS). Supporting documentation can be attached directly to the request form and should be from a student's health care provider or the Student Health Center, clearly indicating the dates of absences and the date the student is able to return to class. Instructors will be notified of such absences.

If you are absent from class as a result of a COVID-19 diagnosis or quarantine, please consult the instructor for any accommodation to help you continue to make progress in the course. The final decision for approval of all absences and missed work is determined by the instructor.

General Student Academic Integrity:

Policies: Integrity is amongst the core values of the Belk College of Business. Students are responsible for knowing and observing the [UNC Charlotte Code of Student Academic Integrity](#). All work on exams and quizzes is to be done on an **individual basis**. This may also be extended to certain assignments and will be specified as such in class. There is always the possibility and temptation to consult with someone who has had the course (or class) previously or to consult case/class notes or project reports from another section or from a previous year or semester or that might be available on the Internet. This practice is **strictly prohibited** under all circumstances and unequivocally constitutes a **violation** of the [Code of Student Academic Integrity](#). Obviously, group projects involve cooperative effort. Everyone, however, is **required** to contribute to the effort for this class, and individual contributions will be evaluated through group peer review and participation score.

For this class, it is permissible to assist classmates in general discussions of business analytics concepts and algorithms. General advice and interactions are encouraged. Each person, however, must develop his or her own solutions to the assigned homework. Students may not "work together" on graded 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. If you need help on an assignment, contact your instructor or the TA, not other classmates. Any further specific requirements or permission regarding academic integrity in this course will be stated by the instructor and are also binding on the students in this course.

Ownership of Course Materials:

The lectures and course materials provided by the instructor including presentations, tests, quizzes, exams, videos, outlines, and similar materials are protected by copyright. The instructor is the exclusive owner of copyright in those materials that instructor has created. You are encouraged to take notes and make copies of course materials for your own educational use. However, you may not, nor you may knowingly allow others to reproduce or distribute course materials publicly without instructor's express written consent. This includes providing materials to commercial course material suppliers such as CourseHero, Chegg, etc. and other similar services. Students who publicly distribute or display or help others publicly distribute or display copies or modified copies of the instructor's materials may be in violation of [UNCC Code of Student Responsibility](#).

Diversity and Inclusion:

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 socioeconomic status.

Disability Accommodations:

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. If you have a disability that qualifies you for academic accommodations, please provide a letter of accommodation from the Office of Disability Services during the first week of class. For more information regarding accommodations, please contact the Office of Disability Services at (704) 687-4355 or stop by their office in 230 Fretwell.

Non-discrimination:

All students and the instructor are expected to engage with each other respectfully. Unwelcome conduct directed toward another person based upon that person's actual or perceived race, actual or perceived gender, color, religion, age, national origin, ethnicity, disability, or veteran status, or for any other reason, may constitute a violation of [UNCC Code of Student Responsibility](#). Any student suspected of engaging in such conduct will be referred to the Office of Student Conduct.

Religious Accommodation for Students:

The instructor will observe [UNCC Policy Religious Accommodation for Students](#) on matters requiring religious accommodation. Please note that the procedure prescribed by this policy requires a notice to the instructor prior to the census date of the semester (typically, the tenth day of the instruction).

Withdrawal from Class:

The administration of this institution has set deadlines for withdrawal from any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, the instructor cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Incomplete Grade:

As per [UNCC Policy](#), incomplete grades will be granted when a student who is otherwise passing has not, due to circumstances beyond his/her control, completed all the work in the course. The missing work must be completed by the deadline specified by the instructor or during the next semester (fall or spring) in residence, but no later than 12 months after the term in which the "I" grade was assigned, whichever comes first. If the "I" grade is not removed during the specified time, a grade of "F", "U" or "N" as appropriate is automatically assigned. *The grade of "I" cannot be removed by enrolling again in the same course.*

Course Changes Disclaimer:

Instructor may modify the standards and requirements set forth in this syllabus and course schedule at any time. Notice of such changes will be by announcement in class and/or by changes to this syllabus posted on the course Canvas site.

INFO 3236-001 – Business Analytics
Course Schedule – Spring 2021
Tue/Thu: 11:30 – 12:45 pm

Week	Date	Topic	Activities/Materials Coverage/Tentative Due Dates
1	01/21	Introduction and Course Overview	Groups, Assignments, Exams, and Quizzes
2	01/26	Overview of Business Analytics	
	01/28	Fundamental Statistical Concepts	
3	02/02	Fundamental Statistical Concepts	
	02/04	Fundamental Statistical Concepts Introduction to SAS Enterprise Miner	
4	02/09	Semester Break – No Classes	
	02/11		
5	02/16	Predictive Analytics – Decision Trees	Quiz #1
	02/18	Predictive Analytics – Decision Trees	
6	02/23	Predictive Analytics – Decision Trees	
	02/25	Predictive Analytics – Decision Trees	
7	03/02	Exam #1 Review; Predictive Analytics – Logistic Regression	Quiz #2
	03/04	Exam #1	Business Analytics Overview, Fundamental Stats Concepts, Decision Trees
8	03/09	Predictive Analytics – Logistic Regression	
	03/11	Predictive Analytics – Logistic Regression	
9	03/16	Predictive Analytics – Logistic Regression	
	03/18	Predictive Analytics – Cluster Analysis	Quiz #3
10	03/23	Predictive Analytics – Cluster Analysis	
	03/25	Predictive Analytics – Cluster Analysis	
11	03/30	Data Management with SAS Enterprise Guide	
	04/01	Exam #2 Review; Data Management with SAS Enterprise Guide	Quiz #4
12	04/06	Exam #2	Logistic Regression and Cluster Analysis
	04/08	Data Management with SAS Enterprise Guide	
13	04/13	Data Visualization and Analytics	
	04/15	Data Visualization and Analytics	Quiz #5
14	04/20	Data Visualization and Analytics	
	04/22	Big Data and Analytics	
15	04/27	Big Data and Analytics; Ethics and Privacy issues in Data Analytics	Quiz #6
	04/29	Open lab day for project	
16	05/04	Final Exam	Data Visualization, Data Management, Big Data, Ethics and Privacy
	05/11	Project Presentations @ 11:00 am	