



UNIVERSITY OF NORTH CAROLINA  
**CHARLOTTE**

Belk College of Business

**MBAD/DSBA 6276 | Strategic Business Analytics | 3 credits**

**Professor:** Dr. Alireza Golmohammadi

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**Teaching Assistant:** Tarun Teja Midityana

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**Online Office Hours:** TTH 11:30 – 12:30pm

**Zoom:** <https://charlotte-edu.zoom.us/j/92221775003?pwd=yMxovs4FXGFGkeUlmqCIIT1bj5zksW.1>

Meeting ID: 922 2177 5003 Passcode: 078954

**Course Description:**

In today's data-rich business environment, successful firms harness analytics not just to streamline operations, but to inform and shape strategic decisions. This course equips students with the analytical mindset and technical tools needed to turn consumer data into actionable insights. Emphasizing the role of analytics in marketing strategy, the course blends conceptual foundations with hands-on applications.

Students will explore how businesses use consumer analytics to understand market behavior, segment customers, design targeting strategies, forecast demand, and evaluate the impact of pricing and promotions. By working through real-world problems, group projects, and analytical frameworks, students will learn how to translate data into persuasive business recommendations.

**Prerequisites:**

An introductory class in statistics/regression, basic computer skills, and working knowledge of MS Excel.

**Class hours and location:**

Mondays: 12:30pm – 3:15pm (DSBA 6276 U01) - The Dubois Center (Uptown) 604

Mondays: 5:30pm – 8:15pm (DSBA 6276 U90) - The Dubois Center (Uptown) 801

## Course Objectives:

This course is grounded in a hands-on, application-first philosophy. Rather than focusing solely on theoretical or statistical depth, the central aim is to help students apply data science methods to real-world business challenges, particularly those involving consumers, markets, and strategic decisions. Each topic in the course is introduced by first exploring a key marketing or consumer phenomenon—such as customer segmentation, market response, or brand positioning. Rather than starting with a tool or model, the course begins by posing a strategic question or challenge that businesses commonly face. From there, students are introduced to the analytic techniques best suited to address that phenomenon, creating a more intuitive and purpose-driven learning experience. In other words, emphasis is placed on applying methods such as clustering, regression, forecasting, and text mining—not in isolation, but as part of a broader analytical decision-making process.

By the end of the course, students will be able to:

- Frame business questions in analytically tractable ways,
- Select and implement relevant models and tools,
- Interpret data outputs in a managerial context, and
- Communicate data-driven recommendations effectively.

A core component of the course is a semester-long group project where students will design and execute an end-to-end analytics solution to a strategic business problem of their choice. This project reinforces the class's core objective: building the ability to apply analytics—not just understand it.

## Required Materials and equipments:

- **Principles of Marketing Engineering and Analytics**, by: Arvind Rangaswamy and Arnaud De Bruyn, Third edition.
- Enginius software  
The license for the textbook and the software can be purchased as a bundle. I will share the specifics in a separate document.
- **Laptop**: in order to complete the requirements of this course, you need to bring your personal laptop to class
- You will also need to have **Microsoft Excel 2016/2019, with “Data Analysis ToolPak”** properly installed. You will also need to either use **STATA** through [this link](#) or install the IBM **SPSS** Statistics software.

It is your responsibility to have both of the software programs ready before Sep 15th. Both of the software programs can be accessed from the following address:  
<https://software.charlotte.edu/>

## Grading Criteria:

Course Element	Percentage
Exam I (13-Oct-25)	20%
Exam II (TBA)	20%
Enginius case studies	30%
Analytics group project	25%
Attendance and Contribution	5%
<b>Total (1000pts)</b>	<b>100%</b>

## Grading Scale:

A 100 % to 90.0%  
B <90.0 % to 80.0%  
C <80.0 % to 70.0%  
U <70.0 % to 0.0%

## Course requirements:

### Exams

There will be two non-cumulative exams. Each exam will cover material from lectures, textbook, assigned readings, presentations, and supplemental material provided by the instructor. Exams will be in the multiple-choice format.

Both exams must be taken at the scheduled time in-class. The first exam will be in the regular class time, but the second exam will be administered according to the UNCC Final Examination Schedule. Students need to be on time for the exams.

- **Notification prior to the exam:** Students who know in advance that they will miss an exam due to a university-excused absence need to have the Students Office send me a notification and should also contact me to schedule a make-up exam.

Students who become ill or face an emergency that will result in a university-excused absence from an exam must contact me before the exam time. In this case, the student must provide adequate documentation and then will be allowed to take an alternate exam.

- **Notification after the exam time or unexcused absence:** The student will receive a grade of zero for the exam.

### Enginius case studies

Throughout the semester, students will work on a series of case studies using the Enginius decision support platform. These cases provide hands-on experience with real-world marketing problems and the analytics tools used to solve them—such as segmentation, positioning, forecasting, and resource allocation.

The primary focus of these cases is not on the technical mechanics of the software, but rather on the interpretation of the results and the ability to translate analytical output into strategic business insights. Students are expected to draw meaningful conclusions, justify recommendations, and communicate effectively in a managerial context.

### **Analytics group project**

Students will collaborate on a semester-long group project that applies course concepts and analytical tools to a real-world business challenge of their choice. This project is a key component of the course and is designed to reinforce the central focus of the class: the application of analytics to business problems.

The project will involve identifying a business or marketing phenomenon (e.g., customer segmentation, market demand shifts, pricing strategy), developing an analytic approach to investigate it, and drawing strategic recommendations based on the data. Each group will act as a team of consultants, guiding their client through a structured process of problem definition, data analysis, interpretation of results, and strategic recommendations.

Emphasis will be placed not just on the technical accuracy of the analysis, but on the clarity, insight, and managerial relevance of the interpretation and final recommendations. Detailed guidance will be provided in a separate project brief.

The deliverables will be two written reports (a mid-semester progress report and a final report) and a classroom presentation. Each student will be assessed based on these elements plus his/her peers' evaluations of his/her contribution. Groups will present their project in the last month of the class. More details will be provided in class

- You will work in the same group for the whole semester. You will need to submit your group info by Sep 1<sup>st</sup> at 5pm.
- You will need to elect a "group representative" who will be in charge of group communications with me and submitting your written report. Each student can email me individually if they have a concern that they'd like to discuss privately.
- You are expected to be fair to your fellow group members and contribute to the assignment. Free riding will not be tolerated and will result in a grade of zero. All of the group members are expected to reach out to me if there is an individual in their group who is not making sufficient contribution.

### **Attendance and Contribution to the Class:**

Learning in this class is related to your willingness to expose your insights and viewpoints to your classmates and me. Thus:

I expect each student to attend the class regularly. I take attendance at random intervals. Missing more than two attendance checks will result in a 1% grade reduction for each additional absence. From time to time, students may be called upon to summarize a discussion, answer a question, or comment upon the material being

covered in class. Moreover, given that some of the exam questions will be based on class discussions, class attendance and note-taking could significantly impact your exam grades.

If you miss a lecture, then you will have to request the notes from a classmate. You are responsible for everything said in class whether you are there or not.

In addition to attending the class regularly, you are expected to contribute to the class. Examples of class contribution include getting involved in class discussions, asking questions, sharing with class a relevant personal experience or a relevant article you have recently read, and even asking for clarification.

Note: 5% of your final course grade will be based on your class attendance and contribution. Attendance and contribution grade will be solely based on the judgement of the instructor.

## **Course Policies:**

### **Syllabus Revision:**

The standards and requirements set forth in this syllabus may be modified at any time by the course instructor. Notice of such changes will be by Canvas announcement or email notice.

### **Late Work and Make-Ups:**

Assignments that are submitted late will receive a zero.

### **Classroom Conduct:**

This class is part of your professional training, and your behavior should reflect that. You are expected to fully read the required readings and submit the assignments on time. Be prepared to actively participate (i.e., not sleep or do puzzles, etc.). Inappropriate and disruptive classroom behavior will not be tolerated and will result in possible removal from the class and/or disciplinary action.

Additionally, it is expected that students show up to class on time and be prepared for the lecture. Constant lateness is the height of unprofessional behavior and will lead to grade reduction. Should I feel that students' lateness is negatively impacting the class, I will impose a "tardiness rule".

The use of any electronic device other than a laptop (for the purpose of notetaking or conducting class activities) is strictly prohibited during class. Those who refuse to follow the rules will be asked to leave the class.

You will work on assignments in groups. You are expected to be fair to your fellow group members and contribute to the group. Free riding will not be tolerated and will result in a grade of zero.

### **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>

## **Other info:**

### **Belk College of Business Statement of Diversity:**

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 not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socioeconomic status.

### **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. Students are expected to submit their own work, either as individuals or contributors to a group assignment. Definitions and examples of plagiarism and other violations are set forth in the Code. The Code is available from the Dean of Students Office or online at: <http://legal.uncc.edu/policies/up-407> Faculty may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.

### **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 University Policy 406, The Code of Student Responsibility. Any student suspected of engaging in such conduct will be referred to the Office of Student Conduct.

### **Title IX:**

Title IX UNC Charlotte is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) have experienced or experiences any of these incidents, know that you are not alone. UNC Charlotte has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

Please be aware that many UNC Charlotte employees, including all faculty members, are considered Responsible Employees who are required to relay any information or reports of sexual misconduct they receive to the Title IX Coordinator. This means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I must report the information to the Title IX Coordinator. Although I have to report the situation, you will still have options about how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need. If you wish to speak to someone confidentially, you can contact any of the following on-campus resources, who

are not required to report the incident to the Title IX Coordinator: (1) University Counseling Center (counselingcenter.uncc.edu, 7-0311); (2) Student Health Center (studenthealth.uncc.edu, 7-7400); or (3) Center for Wellness Promotion (wellness.uncc.edu, 7-7407). Additional information about your options is also available at [titleix.uncc.edu](http://titleix.uncc.edu) under the “Students” tab.

## **Student Support:**

### **Disability Support Services:**

Students seeking accommodations to disabilities must first consult with the Office of Disability Services and follow the instructions of that office for obtaining accommodations.

The Office of Disability Services works with current undergraduate and graduate students along with prospective students to ensure equal access to UNC Charlotte's campus and educational programs.

All services are dependent upon verification of eligibility. Once approved for services, students receive accommodations which are based upon the nature of an individual's disability and documented needs. Students are strongly encouraged to register or check-in for their accommodations with a Disability Services counselor as soon as they have registered for classes. Accommodations are not retro-active and will not begin until the student notifies his or her faculty by providing the Letter of Accommodation. Please visit the Office of Disability Services at for additional resources, email questions to [disability@uncc.edu](mailto:disability@uncc.edu), or call 704-687-0040 (tty/v) for more information.

### **Student Support Services:**

Be sure to take advantage of the wealth of resources and support available at UNC Charlotte. Some of the resources available to you include the University Writing Resource Center, University Counseling Center, and the J. Murrey Atkins Library.

- [University Center for Academic Excellent \(UCAE\) | \(704\) 687 7837 | uncc-ucae@uncc.edu](http://uncc-ucae@uncc.edu)
- [University Writing Resources Center \(WRC\) | 704-687-1899 | wrchelp@uncc.edu](mailto:wrc@uncc.edu)
- [Veteran Student Services | 704-687-5488 | veteranservice@uncc.edu](mailto:veteranservice@uncc.edu)
- [University Counseling Center | 704-687-0311](http://uncc-uc@uncc.edu)
- [Multicultural Resource Center | 704-687-7121 | mrc@uncc.edu](mailto:mrc@uncc.edu)
- [List of computer labs on campus](#)
- [Atkins Library Laptop Lending program](#)

### Tentative course calendar

Week	Date	Topic	Assignment
1	18-Aug-25	Course overview and an introduction to Consumer Analytics	
2	25-Aug-25	NO IN-PERSON CLASS	
3	01-Sep-25	NO CLASS-Labor Day	Project Groups <u>due</u> by 11:59 pm
4	08-Sep-25	Research design in consumer analytics	
5	15-Sep-25	Summary statistics	
6	22-Sep-25	STP and Clustering Analysis	Case study 1
7	29-Sep-25	Group project	Final project topic <u>due</u> by 11:59 pm
8	06-Oct-25	Association Rules and Text Mining	Case study 2
9	13-Oct-25	Exam I	
10	20-Oct-25	TBA	Project's progress report due by 11:59 pm
11	27-Oct-25	Market response models	Case study 3
12	03-Nov-25	Market response models	Case study 4
13	10-Nov-25	Marketing forecasting I	Case study 5
14	17-Nov-25	Marketing forecasting II	Case study 6
15	24-Nov-25	Presentations	
16	01-Dec-25	Presentations	

*Note: This is a flexible course schedule. Dr. Golmohammadi reserves the right to change this schedule and/or syllabus to accommodate unanticipated events and maximize student learning.*