UNIVERSITY OF NORTH CAROLINA
CHARLOTTE
Belk College of Business

MBAD/DSBA 6201 | Business Intelligence and Analytics | 3 credits

Faculty: Dr. Monica Johar
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Office Hours: Tuesday 11:00 am – 12:00 pm and Thursday 11:00 am – 12:00pm
Office Hours Zoom Link:
https://charlotte-edu.zoom.us/j/93972871460?pwd=c3NXTTk3bnJCRWZPOERuN3gxZHJPUT09

Teaching Assistant: Jin Zhao
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TA Office Hours: Monday 4:00 pm – 5:00 pm
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                        Friday 1:00 pm – 2:00 pm
TA Office Hours Zoom Link:
https://charlotte-edu.zoom.us/j/96479270537?pwd=Bs14O4qyR46iLSDo5FSbAomdXimdp5.1

Course Description:

The curriculum examines the complete data value chain - from warehousing and mining to business intelligence applications. Students gain hands-on experience with statistical modeling (Regression, Logit, Clustering), rule-based systems, and knowledge management strategies using industry tools like SAS 9.4, SAS Enterprise Miner, Python, and Apporto virtualization platforms. The course integrates technological, organizational, and managerial perspectives on data utilization.

Software: Apporto, Python, SAS 9.4, and SAS Enterprise Miner

Pre or Co-requisite:

Bootcamp courses：
There are two Bootcamp courses described below that you are required to complete for this course. Each is a Canvas course.

Statistics for Data Science Overview (30 points): You can complete each module in the course or pass the comprehensive assessment and get a completion certificate. Only then will you get credit for the 30 points in this class. The estimated time required for completion is 10 hours. It is recommended to complete these as soon as possible.
Introduction to SAS (20 points): You must complete Modules 1-4 to get credit for the 20 points in this class. The estimated time required for completion is 5 hours. It is recommended to complete these as soon as possible.

Meeting Times:

Class Hours: Monday 12:00 pm – 2:45 pm, Aug. 18, 2025 - Oct. 10, 2025
Website: canvas.uncc.edu

Course Objectives:

This program develops professionals capable of transforming organizational data into strategic assets through mastery of data warehousing, business intelligence systems, and advanced analytics techniques including predictive modeling (regression, clustering, decision trees) and knowledge management frameworks.

Career Competencies:

➢ Technical Implementation: SAS/Python programming, enterprise mining tools, and BI system operation
➢ Analytical Modeling: Building and interpreting regression, classification, and clustering models
➢ Data Governance: Secure data sharing protocols and knowledge capital optimization
➢ Decision Architecture: Translating analytical outputs into actionable business strategies

Required Materials:

➢ Handouts, Power-point Slides, and Assignment Help documents will be posted on Canvas

Your Niner Course Pack materials are available through First Day Complete, a program managed by Barnes & Noble Charlotte that provides digital course materials to students at a discount. If you wish to opt out of First Day Complete, visit https://aux.charlotte.edu/niner-pack for information.
If you opt out, access to digital course materials available within Canvas will be removed and you are still responsible for purchasing all required course materials, unless you opt back in before the deadline. You may purchase your materials through Barnes & Noble Charlotte in the Popp Martin Student Union.

Grading Criteria:

Grading: We plan to use Canvas to assist with courses and grading, where you can see the scores details for each item.

Course Element
Assignments (Total 9 excluding SAS project)
SDS Bootcamp
SAS Predictive Modeling
SAS Association Rule Mining
Class Participation (Total 9)
Exam （Total 3）

Grading Scale:

A 100 % to 90.0%

B <90.0 % to 80.0%

C <80.0 % to 70.0%

D <70.0 % to 60.0%

F <60.0 % to 0.0%

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.

Classroom Conduct:

I will conduct this class in an atmosphere of mutual respect. I encourage your active participation in class discussions. Each of us may have strongly differing opinions on the various topics of class discussions. The conflict of ideas is encouraged and welcome. The orderly questioning of the ideas of others, including mine, is similarly welcome. However, I will exercise my responsibility to manage the discussions so that ideas and argument can proceed in an orderly fashion. You should expect that if your

conduct during class discussions seriously disrupts the atmosphere of mutual respect I expect in this class, you will not be permitted to participate further.

Course Schedule:

Week	Day	Activity	Activity Due	Date
		Online MBAD 6201 Course Schedule		
Week 1	Day 1	Watch Introduction Instructional Videos 1,2. Read Big Data in Big Companies Article	Complete discussion on Big Data in Big Companies article	18-Aug
	Day 2	Watch Instructional Videos 1,2,3 on Regression		19-Aug
	Day 3	Watch Instructional Videos 4,5,6,7 on Regression		20-Aug
	Day 4	Watch Instructional Videos 8,9,10 on Regression		21-Aug
	Day 5	Start Activity 1 Regression Class Participation - Review all Instructional Materials in Module		22-Aug
Week 2	Day 6	Start Activity 2 Regression Assignment - Review all Instructional Materials in Modules	Activity 1 - Regression Class Participation	23-Aug
	Day 7			24-Aug
	Day 8	Watch Instructional Videos 1,2,3 on Data Warehousing	Activity 2 - Regression Assignment	25-Aug
	Day 9	Watch Instructional Videos 4,5,6 on Data Warehousing		26-Aug
	Day 10	Start Activity 3 Data Warehousing Class Participation - Review all Instructional Materials in Module		27-Aug
	Day 11	Start Activity 4 Data Warehousing Assignment - Review all Instructional Materials in Module	Activity 3 - Datawarehousing Class Participation	28-Aug
	Day 12			29-Aug
Week 3	Day 13	Watch Instructional Videos 1,2 on Decision Tables	Activity 4 - Datawarehousing Assignment	30-Aug
	Day 14	Start Activity 5 Decision Tables Class Participation - Review all Instructional Materials in Module		31-Aug
	Day 15	Start Activity 6 Decision Tables Assignment - Review all Instructional Materials in Module	Activity 5 - Decision Tables Class Participation	1-Sep
	Day 16			2-Sep
	Day 17	Watch Instructional Videos 1,2 on ROC	Activity 6 - Decision Tables Assignment	3-Sep
	Day 18	Watch Instructional Videos 3 on ROC		4-Sep
	Day 19	Start Activity 7 ROC Assignment - Review all Instructional Materials in Module	Activity 7 ROC Assignment	5-Sep
Week 4	Day 20			6-Sep
	Day 21	EXAM 1 - Regression, Datawarehousing, Decision Tables, ROC		7-Sep
	Day 22	Watch Instructional Videos 1,2,3 on Decision Trees		8-Sep
	Day 23	Watch Instructional Videos 4,5 on Decision Trees		9-Sep
	Day 24	Watch Instructional Video 6,7 on Decision Trees		10-Sep
	Day 25	Start Activity 8 Decision Trees Class Participation - Review all Instructional Materials in Module		11-Sep
	Day 26	Start Activity 9 Decision Trees Assignment - Review all Instructional Materials in Module	Activity 8 Decision Trees Class Participation	12-Sep
Week 5	Day 27			13-Sep
	Day 28	Watch Instructional Videos 1,2 on Logit & MLE	Activity 9 Decision Trees Assignment	14-Sep
	Day 29	Watch Instructional Videos 3,4,5 on Logit & MLE		15-Sep
	Day 30	Start Activity 10 Logit Class Participation - Review all Instructional Materials in Module		16-Sep
	Day 31	Start Activity 11 Logit Assignment - Review all Instructional Materials in Module	Activity 10 Logit Class Participation	17-Sep
	Day 32	Start Activity 19 SAS E Miner Group Project Part 2 - Predictive Analytics		18-Sep
	Day 33		Activity 11 Logit Assignment	19-Sep
Week 6	Day 34	Watch Instructional Videos 1,2 on Clustering		20-Sep
	Day 35	Watch Instructional Videos 3 on Clustering		21-Sep
	Day 36	Watch Instructional Videos 1,2,3 on Group Project		22-Sep
	Day 37	Start activity 18 & 19 - SAS E Miner Group Project		23-Sep
	Day 38	Start Activity 12 & 14 Clustering & Clustering in SAS Class Participation - Review all Instructional Materials in Module		24-Sep
	Day 39	Start Activity 13 & 15 Clustering & Clustering in SAS Assignment - Review all Instructional Materials in Module	Activity 12 & 14 Clustering & Clustering in SAS Class Participation	25-Sep
	Day 40			26-Sep
Week 7	Day 41	Watch Instructional Videos 1,2 on Association Rule Mining	Actvity 13 & 15 Clustering & Clustering in SAS Assignment	27-Sep
	Day 42	Watch Instructional Videos 3,4 on Association Rule Mining		28-Sep
	Day 43	Start Activity 16 Association Rule Mining Class Participation - Review all Instructional Materials in Module		29-Sep
	Day 44	Start Activity 17 Association Rule Mining Assignment - Review all Instructional Materials in Module	Activity 16 Association Rule Mining Class Participation	30-Sep
	Day 45	Start Activity 18 SAS E Miner Group Project Part 1 - Association Rule Mining		1-Oct
	Day 46		Activity 17 Association Rule Mining Assignment	2-Oct
	Day 47	EXAM 2 - Decision Trees, Logit, Clustering, Association Rule Mining		3-Oct
Week 8	Day 48		Activity 18 & 19 SAS E Miner Group Project	4-Oct
	Day 49	EXAM 3 - Comprehensive Exam		5-Oct

Assignments：

All assignments（Including Class Participation） should be completed on time and submitted on Canvas before the submission deadline as shown on Canvas. These assignments will involve the use of concepts discussed and taught in class.

Assignments must be submitted through Canvas; submission of electronic copies by e-mail or disk is not acceptable. Your NAME and ID should appear on the top of each page that you submit.

Students violating these policies will be marked for disruptive behavior and may be asked to leave the class. Their grade will also be affected according to the rules of class participation points (pages 2 and 3 of this document).

Exam Policy:

It should be noted that the course has **3 exams – 2 required exams** (Exam 1 and Exam 2) and 1 optional exam (Comprehensive Final). Two exams with the highest scores will be considered towards the final grade. This implies that if the student chooses to take all 3 exams, the exam with the lowest score will not be considered for the final grade calculation.
During the exam session:
1. You need to put away all notes and cell phones prior to starting the exam.
2. You are only permitted to access the Exam questions on Canvas.
3. You are prohibited from:
• Browsing any website other than Canvas
• Open any files from your machine or from elsewhere.
• Access to any help resource other than SAS Help via the SAS software portal.
4. At any point during the Exam the Professor or the TA may ask you to show all content being accessed on your machine. Don't be offended. This is necessary.
5. Before the exam, students need to install Lockdown browser through Canvas. The Center for Teaching and Learning has more details
at   https://teaching.charlotte.edu/academic-technologies/respondus/.

ANY VIOLATION OF THE ABOVE RULES WILLCONSTITUTE A VIOLATION OF SCHOLASTICHONESTY AND WILL RESULT IN YOURECEIVING A "U" IN THIS COURSE, A " U" IN ANY GRADUATE COURSE WILLRESULT IN YOUR REMOVAL FROM THEPROGRAM AS PER GRADUATE SCHOOLREQUIREMENTS.

Missed Exam Policy:

There are no accommodations for missed exams. However, if you have a medical emergency or are representing the university for any reason you will be allowed to take up a make-up exam if and only if proper documentation is provided. The final decision rests with the course instructor.

Students violating these policies will be marked for disruptive behavior and may be asked to leave the class. Their grade will also be affected according to the rules of class participation points (pages 2 and 3 of this document).

Course Credit Workload:

This is a 3-credit hour course. **Thus, the course has been designed to require on average about 10 hours/week** (about 3 hours outside of class for every 1 credit hour)

between readings, quizzes, and exercise/project work. Of course, the hours may be more or less than indicated above depending on the assignments, cases, exams, or project work due. If a student has limited background in certain topics, they might need to spend additional time to keep up with other students in the course.

Laptop requirements:

It is not recommended to use a laptop during class, but it is necessary for post class tasks and exams.

Webcam Use in the Classroom:

This course may require you to use a webcam for class sessions and/or assessments. Classes and assessments may be conducted using Zoom or other technology selected by your instructor which may use your computer's webcam or other technologies to communicate, monitor, and/or record classes, class activities, and assessments. Assessments may also be conducted using proctoring software, which may listen to you, monitor your computer screen, view you and your surroundings, and record (including visual and audio recordings) all activity during the proctoring process. Please contact your instructor if you are unable to comply or have any questions or concerns.

Introduction to Canvas:

Website: canvas.uncc.edu
Canvas is a software tool for the use of instructors, teaching assistants (TA) and students. It is accessible from the Internet both on and off campus and has the following features:
1. Syllabus: A current copy of the course syllabus.
2. Files: Notes provided from the textbook vendor and the instructor.
3. Announcements: Instructor/TA can communicate with students about course activities andpost interesting course-related topics
4. Discussions: Students can post any course-related queries here.
5. Grades: You can access your grades here. If you have questions about your grades, communicate through Canvas mail with the instructor. Check the bulletin board to see if there is a message to the class about the posting of grades.
6. Assignments: Assignments will be posted here and can be downloaded to your PC. Each assignment will have a deadline. This is the latest time the assignment can be submitted without penalty. You can upload your assignment file many times and submit it many times before the given deadline. After the deadline, your assignment will be frozen and you will not be able to change your assignment (if it is turned in before the deadline).
If you submit your assignment after the deadline，it will be considered late.
Once your assignment is graded, comments on your assignment will appear along with your grade on Canvas.

University Policies and Notices:

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 and other violations are set forth in the Code and on the [Student Accountability & Conflict Resolution website](). The Code is available from the Dean of Students Office or online at [legal.charlotte.edu/policies/up-407](). Additional resources are available on the [Student Accountability & Conflict Resolution website]().

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.

Syllabus Policy:

Permitting generative AI use in specific designated assignments, but not all. Students must disclose any AI assistance.

Generative AI Permitted in this Course Only as Designated, with Attribution

In this course, students are permitted to use generative AI tools such as ChatGPT only for specific assignments, and **only as designated by the instructor**. To maintain academic integrity, students must disclose any AI-generated material they use and properly attribute it, including in-text citations, quotations, and references (see, for example, https://apastyle.apa.org/blog/how-to-cite-chatgpt). Be aware that students are responsible for any errors or information that is misrepresented or inaccurate (i.e. hallucinations) that generative AI tools produce when submitting work that includes AI-generated material. In addition, use of a generative AI tool that is not specifically authorized by the instructor may constitute a violation of the [Code of Student Academic Integrity]().

Students should also include the following statement in their assignments to indicate use of a generative AI tool: "The author(s) acknowledges the use of [generative AI tool Name] in the preparation or completion of this assignment. The [generative AI tool Name] was used in the following way(s) in this assignment: [e.g., brainstorming, grammatical correction, citation, which portion of the assignment]."

Important Note on Data Protection and Privacy: When using generative AI tools, it is important to be aware that the data you supply might be used for training AI models or other purposes. Consequently, there is no guarantee that the information you provide will remain confidential. You should exercise caution and avoid sharing any sensitive or private information when using these tools. Examples of such information include

personally identifiable information, protected health information, financial data, intellectual property, original research, and any other data that might otherwise be legally protected.

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.

Basic Needs:

UNC Charlotte defines basic needs as those needs that, when unmet, can hinder students' ability to focus on and successfully complete their academic studies. Basic needs include food security, housing security, transportation, health and wellbeing, technology and child care. Any student who experiences difficulty in one or more of these areas is urged to contact the Student Assistance and Support Services (SASS) Office for support with navigating campus and community resources. Students can also consult the Niner Needs website for a list of helpful resources designed to address student needs (https://ninerneeds.charlotte.edu/).

Preferred Gender Pronouns:

This course affirms people of all gender expressions and gender identities. If you prefer to be called a different name than what is indicated on the class roster, please let me know. Feel free to correct me on your preferred gender pronoun. If you have any questions or concerns, please do not hesitate to contact me.

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) has 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 civil protective orders, and more.

Please be aware that all UNC Charlotte employees, including faculty members, are expected 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 am

expected to report the information to the Title IX Coordinator. Although I am expected 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 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); or (2) Student Health Center (studenthealth.uncc.edu, 7-7400). Additional information about your options is also available at titleix.uncc.edu under the "Students" tab.

Religious Accommodation:

Students who, acting in accordance with this Policy, miss classes, examinations or other assignments because of a religious practice or belief must be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a Request for Religious Accommodation Form to their instructor prior to the census date for enrollment for a given semester. The census date for each semester (typically the tenth day of instruction) can be found in UNC Charlotte's academic calendar.

Student Grievances:

Student Grievances Students enrolled in courses at the University of North Carolina at Charlotte who would like to file a complaint regarding their experience may do the following: 1. Refer to the UNC Charlotte Student Grievance Procedure. Students may also contact UNC Charlotte's regional accrediting agency, the Southern Association of Colleges and Schools Commission on Colleges. 2. Students residing outside of North Carolina while attending UNC Charlotte may file a complaint in their state of residence. As required by federal regulations, students are directed to the list of resources here, compiled and updated by the State Higher Education Executive Officers.

Withdrawals:

Students are expected to complete all courses for which they are registered at the close of the add/drop period. If you are concerned about your ability to succeed in this course, it is important to make an appointment to speak with me as soon as possible. The University policy on withdrawal allows students only a limited number of opportunities available to withdraw from courses. It is important for you to understand the financial and academic consequences that may result from course withdrawal.

Incompletes:

The grade of I is assigned at the discretion of the instructor 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, and no later than 12 months. If the I 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, and students should not re-enroll in a course in which they have been assigned the grade of I. University policy addressing Incompletes.

FERPA Notification:

In establishing [University Policy 402, Student Education Records](#), UNC Charlotte adheres to a policy of compliance with the [Family Educational Rights and Privacy Act of 1974](#), also known as FERPA, a federal law that affords students the following rights with respect to their education records. For details, see the [FERPA Annual Notification](#) posted on the Office of Legal Affairs website. All questions concerning this FERPA Annual Notification may be directed to the attention of the [Office of the Registrar](#).

Student Consent for Plagiarism Detection Tools:

NOTE: UNC Charlotte has contracted with SimCheck for plagiarism detection services. Use of SimCheck (or another plagiarism detection service) is entirely in the discretion of the instructor, but use of such services requires:

1. that you provide advance notice (via syllabus) to your students that you are using such services and
2. that you obtain a signed [consent form](#) from each student.

As a condition of taking this course, all work/papers that the instructor in good faith suspects are in whole or in part plagiarized may be subject to submission for textual similarity review to [SimCheck](#) or another service for the detection of plagiarism. Such works will be included as source documents in the SimCheck or other plagiarism detection service reference database solely for the purpose of detecting plagiarism of such papers. No student papers will be submitted to SimCheck or other plagiarism detection service without a student's [written consent and permission](#).

Likewise, as a condition of taking this course, all work/papers that the instructor in good faith suspects are in whole or in part created with the unauthorized use of a generative AI tool are subject to submission to a generative AI detection tool. If a student does not provide such written consent and permission, the instructor may: (i) require a short reflection paper on research methodology; (ii) require a draft bibliography prior to submission of the final paper; or (iii) require the cover page and first cited page of each reference source to be photocopied and submitted with the final paper.

Student Support:

Disability Support Services:

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.

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, or call 704-687-0040 (tty/v) for more information.

Accessing Help/Mental Health Services:

Mental health concerns or stressful events may reduce a student's ability to participate in daily activities or diminish academic performance. Services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via the Counseling & Psychological Services (CAPS) website at caps.uncc.edu.

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
- University Writing Resources Center (WRC) | 704-687-1899 | wrchelp@uncc.edu
- Veteran Student Services | 704-687-5488 | veteranservice@uncc.edu
- University Counseling Center | 704-687-0311
- Multicultural Resource Center | 704-687-7121 | mrc@uncc.edu
- List of computer labs on campus
- Atkins Library Laptop Lending program

Food Insecurity:

Food insecurity is defined by the USDA as "a lack of access to enough food for an active, healthy life." Food insecure categories include: reduced caloric intake, reduced food quality, lack of variety in diet, disrupted eating patterns, and hunger. Research shows that college students experience food insecurity at higher rates than the American household rate, and that food insecurity can negatively impact academic performance and persistence. In recognition of this problem, UNC Charlotte offers assistance to students facing food insecurity through an on- campus food pantry. The Jamil Niner Student Pantry (JNSP) is located on the east edge of campus at 1224 John Kirk Road. It has regular hours which may change from semester to semester; please see the website at https://ninerpantry.uncc.edu/ for schedule and details on its services, as well as resources about hunger and food insecurity among college students.