NORTH SOUTH UNIVERSITY

Center of Excellence in higher Education

The first private university in Bangladesh

School of Business

Department of Management

Course Name:	Marketing Analytics
Course Code & Section No:	MKT475 Section 1
Semester:	Summer 2024

INSTRUCTOR & DEPARTMENT INFORMATION

1. Instructor Name:	Dr. Atikur Rahman Khan (ARK1)
2. Office	NAC 836
3. Office Hours:	MW 3:00 PM – 4:30 PM or by appointment
4. Office Phone:	
5. Email Address:	atikur.khan@northsouth.edu
6. Department:	Management
7. Links:	North South University Website: http://www.northsouth.edu School of Business Website: http://www.northsouth.edu/academic/sob/

COURSE & SECTION INFORMATION

Class Time & Location	MW 1:40 PM – 2:55 PM, NAC 513
Course Prerequisite(s)	BUS 173
Course Credit Hours	3:0
Course Description	This course will introduce students to learn about big data, marketing analytics and business analytics tools in the form of assessing significant business metrics for identifying prospects of improving business performance. The course will also enable the students to use marketing analytics with R and Excel to assess and analyze different datasets of different available consumer databases. Students will be able to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns and trends in the form of maps, globes, reports and charts. They will learn to answer questions, interpret results and solve problems by looking at data in a way that is quickly understood and easily shared.
Course Objectives	The course contents are designed to give students a clear idea about: • Understanding the needs of data in data-driven marketing (advertisement, retailing, pricing, etc.) • Descriptive analytics and data visualization • A/B testing in marketing • Classification and segmentation of customer data • Predictive analytics (multiple regression, logistic regression, decision tree, etc.) • Customer churn and lifetime value • Pricing and bundling, advertising and marketing mix model • Forecasting and time series analysis for prescriptive analytics

Table 01: Course Learning Outcomes (CLO)

CLO1	Understand the role of marketing analytics in marketing strategy and decision-making.
CLO2	Develop proficiency in using statistical software to analyze marketing data and draw insights, including customer behavior and preferences.
CLO3	Apply data visualization techniques to present marketing insights and communicate results effectively.
CLO4	Use predictive analytics to forecast sales and evaluate the effectiveness of marketing campaigns.
CLO5	Apply ethical and legal principles in the collection, analysis, and use of marketing data, and develop an understanding of segmentation and targeting strategies using marketing analytics.

Table 02: Program Learning Outcome (PLO)

PLO	**Benchmark Domains (Standards)**	**BBA in Marketing**
PLO1	Knowledge	Students will gain a deep understanding of marketing analytics, including its methods, tools, and applications in marketing strategy and decision-making.
PLO2	Practical skills	Students will develop practical skills in using statistical software, data visualization, and predictive analytics to analyze marketing data and draw insights.
PLO3	Thinking and scientific skills	Students will learn critical thinking skills, including how to identify and evaluate key metrics, assess the reliability of data sources, and draw conclusions based on data analysis.
PLO4	Communication skills	Students will learn how to effectively present marketing insights using data visualization techniques and communicate results to different stakeholders.
PLO5	Social skills, teamwork, and responsibility	Students will have opportunities to work collaboratively on group projects and develop social skills such as active listening, conflict resolution, and leadership, while also taking responsibility for their individual contributions to the team.
PLO6	Values, ethics, moral and professionalism	Students will develop an understanding of ethical and legal principles in the collection, analysis, and use of marketing data, as well as an appreciation for professionalism and ethical conduct in marketing analytics.
PLO7	Information Management and lifelong learning	Students will develop skills in managing marketing data, including data collection, cleaning, storage, and retrieval, as well as an appreciation for the importance of lifelong learning in a rapidly changing field.
PLO8	Managerial and entrepreneurial skills	Students will learn how to apply marketing analytics to solve real-world business problems and make strategic decisions, as well as develop an entrepreneurial mindset by identifying and capitalizing on opportunities for innovation and growth.

Table 03: Mapping of CLOs to PLOs

	PLO1	**PLO2**	**PLO3**	**PLO4**	**PLO5**	**PLO6**	**PLO7**	**PLO8**
CLO1	X							X
CLO2		X	X		X		X	
CLO3				X				
CLO4		X						X
CLO5			X			X	X	

TEXTBOOK(S)

Author	Title	Edition & Year	Publisher	ISBN
Yildrim, G. and Kübler, R.	Applied Marketing Analytics with R	1st Edition, 2023	Sage	9781529768725
Winston, W. L.	Marketing Analytics: Data-Driven Techniques with Microsoft Excel	1st Edition, 2015	Wiley	9781118373439
Chapman, C. and Feit, E. M.	R for Marketing Research and Analytics	2nd Edition, 2019	Springer	9783030143152

TEACHING STRATEGY

The instructor will present the concepts of business intelligence through lecture and guided discussion. The principles will be applied to a variety of business conditions and will be presented from a "real world perspective.". Classes will be conducted using a variety of methods. These will include lectures, small group discussions and exercises, and lab works. You are encouraged to actively participate in all aspects of the class as significant learning occurs when all members of the class make contributions. I see my role as to facilitate learning through a varied and collaborative experience, not simply by lecturing.

ASSESSMENT STRATEGY AND GRADING SCHEME

Grading tool	Points
Test 1	20%
Test 2	20%
Quiz	10%
Assignment/Lab	10%
Final Exam	20%
Project & Presentation	10%
Attendance	10%

The final grade will be a percentage of the accumulation of all points received over the course as follows (eg: your earned points/total points) 100

100%-93%=A
92%-90%=A-
89%-87%=B+
86%-83%=B
82%-80%=B-
79%-77%=C+
76%-73%=C
72%-70%=C-
69%-67%=D+
60%-66%=D
60% or less =F

Note: This assigned percentage letter grade may be altered at the instructor's discretion

CLASS ROOM RULES OF CONDUCT

1. Cellular phones should be "**turned off**"/"**Silent mode"** during the class.
2. Students are advised to frequently refer to the **Student Handbook of North South University** on the following link:

   http://www.northsouth.edu/student-code-of-conduct.html

3. **Academic Integrity Policy:**

Academic dishonesty of any type will not be tolerated. This includes, but is not limited to, plagiarism (copying others work and representing it as our own—in part or in total— without tile appropriate citations) and copying others responses during the exams. In addition, classroom professionalism is to be maintained at all times. This means that when the professor is speaking or when Students are presenting their ideas. The classroom should he silent, with the exception of invited questions. As in any academic environment questions are welcome, but informal chatter or communication among class members becomes a distraction for all those in attendance and will not be tolerated.

No talking or other forms of communication with other students will be allowed when exams are being distributed. The 'no talking' requirement is enforced during the exam and continues until all students have handed their exam in to the instructor. Any talking during the exam will disqualify you from taking the exam. It is my (and all other professors) expectation that your academic work for the course will be performed without resorting to cheating, plagiarism, lying, and/or bribery. Any student engaging in any of these behaviors will be dealt according to North South University's code of conduct.

EXAMS, QUIZ & MAKE UP POLICY

Quiz may or may not be announced and may not be made up for any reason. All exams will be given over the designated class period. The exams must be taken at the scheduled times. **Exams may not be made up unless arrangements are made prior to the class period for which they are scheduled.**

Cell phones are prohibited in exam sessions.

ATTENDANCE POLICY

In order to foster a collaborative learning experience where shared student participation is important, attendance is critical. We recognize situations may develop where a student may miss class due to illness, unique family considerations. In such a case, the student is still responsible to ensure his/her assignments are submitted on time and that the information covered in that session is collected properly. Arriving late for class is rude, unprofessional, and detracts from the learning experience of your fellow students. Consistent tardiness has the following consequences. First late arrival - no penalty, second late arrival and thereafter - ½ %off final course grade. North South University mandates to fail students who are absent 25% or more from their classes, even if such absences are excusable.

COURSE ADJUSTMENTS

The lecturer reserves the right to make adjustments in the course requirements consistent with the course's overall objectives. Total course workload and available time will be considered in any such adjustments. You will be notified at the earliest possible time if changes are to be made.

COMMUNICATION POLICY

Instructor will use his email and the website to communicate with students. Students are responsible to check their emails and the website regularly.

APPROPRIATE USE POLICY

All members of the North South University community must use electronic communications in a responsible manner. The University may restrict the use of its computers and network systems for electronic communications subject to violations of university policies/codes or local laws or national laws. Also, the

university reserves the right to limit access to its networks through university-owned or other computers, and to remove or limit access to material posted on university-owned computers.

STUDENTS WITH SPECIAL NEEDS

North South University will provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities/special needs that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their instructors to ensure that their needs are met. The University through its Special Need section will exert all efforts to accommodate special needs.

STUDENTS COMPLAINTS POLICY

Students at North South University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

Course outline
MKT475: Marketing Analytics

Chapter/Topic	Lecture (in Lab)	Assessment
1: Introduction to R for Marketing Analytics	1	
2. Descriptive Analytics (Data Organization, Visualization, and Descriptive Measures) with R	2-3	
3. Inferential Analytics and A/B Testing with R	4-5	Quiz/Lab Submission-1
4. Predictive Analytics with R: Multiple regression	6	
5. Predictive Analytics with R: Logistic regression	7	
6. Segmentation and Targeting with R	8-9	
Review for Test-1	10	
Test-1 (Chapter/Topic 1 to 6)	11	**Test-1**
7. Pricing (Pricing strategy for profit maximization, bundling, price skimming, and price optimization)	12-15	Quiz/Lab Submission-2
8. Customer churn and lifetime value (Estimating churn rate and customer lifetime value, Monte Carlo simulation to model customer value, using customer value to value a business, and optimizing retention and acquisition spending)	16-18	
Review for Test-2	19	
Test-2 (Chapter/Topic 7-8)	**20**	**Test-2**
9. Retailing (SCAN*PRO model, optimizing allocation of sales effort, and profit-maximizing shelf space allocation)	21-23	
10. Advertising (SCAN*PRO and Adstock model, estimating ad effectiveness, and optimizing advertising)	24-26	Quiz/Lab Submission-3
11. Forecasting (Autoregressive Integrated Moving Average (ARIMA) model, Holt-Winters' seasonal model, and neural networks)	27-28	
Project & Presentation	29	**Presentation**
Final Exam (Chapter/Topic 9-11)	**TBA**	**Final Exam**