# MDSE 5330: Consumer Analytics and Data Visualization
## TuTh 5-6:20 pm,  Internet Course
## Online Office Hour: TR 6:30-7:30 pm

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Course website (Canvas): https://unt.instructure.com/courses/102317
Class Zoom: https://unt.zoom.us/meeting/register/tZUlf-2pqTIsHdLhohKkzAthBTbybPYO4zkj

## COURSE DESCRIPTION

Examination of various consumer research methodologies including descriptive and predictive analysis. Application of analytical techniques in developing effective business strategies using **analytics tools** and **data visualization** programs.

This course will meet weekly on Tuesdays and Thursdays from 5:00pm to 6:20pm synchronously online. No on-site meetings. **Online participations of class and exams at the scheduled times are mandatory**.

Objective of this class is to:
1.  Apply concepts in data preparation
2.  Apply statistical concepts in descriptive and predictive analytics
3.  Identify and apply key customer **metrics** needed to solve the target problem
4.  Utilize proper analysis techniques to draw inferences from data
5.  Develop a graphical representation of data and inferences and evaluate alternative presentation strategies
6.  Construct a written report and presentation that explain and justify recommended business strategy.

This class and its assignment meet the following global learning outcome of the college:
*Critical Thinking*, *Collaboration*, *Effective Communications*

**PRE-REQUISITE:** C or higher in MDSE 3750 or concurrent.

**READINGS:** The course uses the combination of teaching method such as lecture, lab, case discussion, interactive activity and group projects. Reading includes case article, book chapters, trade publication articles and course notes. Detailed information on how to obtain the reading materials will be discussed in class and posted on Canvas.

**Class Zoom registration:** you need to one-time registration in advance by clicking:
https://unt.zoom.us/meeting/register/tZUlf-2pqTIsHdLhohKkzAthBTbybPYO4zkj
After registering, you will receive a confirmation email containing information about joining the meeting.

## SOFTWARE
1.  **Microsoft Office:** Available on the CMHT check-out laptops. To access Excel on Office365, simply visit the Office365 login page at webmail.unt.edu and enter your UNT email address and password.

You are also required to authenticate with Duo MFA. You can access Office apps by clicking the Apps Launcher button at the top-left corner of the page.

2. **Tableau:** Advanced data analytical and visualization tool. Student license is available on the CMHT check-out laptops and/or install it on your computer through the following link.

- Download Tableau Desktop and Tableau Prep (instruction will be given later).
- Students can continue using Tableau after the class is over by individually requesting their own one-year license through https://community.tableau.com/community/students/
  Activation code:  TBD
- Other resources: Student Resource Page (tableau.com)

**GRADING POLICY**

| Items | Points |
|---|---|
| Class Attendance (4 points/each) | 4 x 25  = 100 |
| Assignments (15 points/each) | 15 x 18 = 270 |
| Graduate research project: interactive Tableau dashboard to be presented | 150 |
| 1st, 2nd and 3rd Exams (100 pints/each) | 3 x 125 = 375 |
| Final Exam (comprehensive) | 250 |
| Total | 1145 |

*Each assignment (H1-H20) is due at the beginning (4:59pm) of the next class day.

A:  Total >= 90% (1030);
B:  90% > Total >= 80% (916);
C:  80% > Total >= 70% (801);
D:  70% > Total >= 60% (687);
F:  Total < 60%

- Please put the four exam-days on your calendar so that no other events are scheduled at the same time.
- **No make-up exam** except for justifiable extraordinary circumstances such as personal illness, death in the family with a written note from a physician or a family member.
- Only assignments submitted on time can receive the full credit. A 25%, 50%, or 75% of the full credit will be deducted for an assignment that is submitted one day, two, or three days after the due day.  No point will be given to an assignment late more than three days unless a proof of a justifiable circumstance (same as above) is presented.

**Attendance:**
- Online attendance of class is **mandatory** and will be checked at the beginning of each class. Please be punctual and remain until class is dismissed. In each class, you are required to take on the video of your computer camera and mute the audio (unless you need to ask a question or for the entire period.
- Each class attendance counts for 4 points.
- An excused absence is only granted for personal illness, death in the family, or some other extraordinary circumstances, and must be verified in writing by a physician or appropriate authority.

- Students are responsible for any announcement and getting class materials during their absence of class.

## Tentative Agenda

| Week | Date | Topic | Online Module | Due |
|------|------|-------|---------------|-----|
| 1 | 1/16 | Introduction to class | | |
| | | **Excel Pivot Table** | | |
| | 1/18 | Data format and PivotTable | Mod1 | |
| 2 | 1/23 | Manage PivotTable | Mod2 | H1 |
| | 1/25 | Format PivotTables | Mod3 | H2 |
| 3 | 1/30 | PivotChart | Mod4 | H3 |
| | 2/1 | In-class practice and Review | | |
| 4 | 2/6 | **Exam 1** | | |
| | | **Tableau Essential** | | |
| | 2/8 | Tableau Interface | Mod5 | H4 |
| 5 | 2/13 | Connect Data and Export Workbook | Mod6 | H5 |
| | 2/15 | Data Types and Manage Worksheet | Mod7 | H6 |
| 6 | 2/20 | Analyze Data | Mod8 | H7 |
| | 2/22 | Sort and Filter Data | Mod9 | H8 |
| 7 | 2/27 | Groups, Sets and Hierarchy | Mod10 | H9 |
| | 2/29 | Review and Project assignment | | H10 |
| 8 | 3/5 | **Exam 2** | | |
| | 3/7 | Charts (1) | Mod11 | |
| 9 | 3/11-3/17 | Spring break, March 11 - 17, 2024 | | |
| 10 | 3/19 | Charts (2) | Mod12 | H11 |
| | 3/21 | Format Visualization | Mod13 | H12 |
| 11 | 3/26 | Date Analytics 1 (trend, reference) | Mod14 | H13 |
| | 3/28 | Date Analytics 2 (forecast, cluster) | Mod15 | H14 |
| 12 | 4/2 | Map Geographic Data | Mod16 | H15 |
| | 4/4 | Dashboard and Story | Mod17 | H16 |
| 13 | 4/9 | Review and in-class Practices | | H17 |
| | 4/11 | **Exam 3** | | |
| 14 | 4/16 | **Tableau Prep:** Building a flow | Mod18 | |
| | 4/18 | Tableau Prep Conductor | Mod19 | H18 |
| 15 | 4/23 | Project Presentation | | |
| | 4/25 | Project Presentation | | Project Report & twbx file |
| 16 | 4/30 | Final Review | | |
| | 5/2 | In-class Practices (pre-final days) | | |
| | 5/3 | **Reading Day** | | |
| | | | | |
| | 5/7 | **Final exam: TUESDAY, MAY 7, 4:00 P.M. – 6:00 P.M.** | | |

*This syllabus is subject to change when the instructor deems it necessary to achieve course objectives.*


**MINIMUM TECHNOLOGY REQUIREMENTS**

- **High-speed internet connection (DSL or a cable modem):** Your internet connection is critical for attending the online classes.
- **Internet Browser**: you need to access Canvas using Google Chrome, Firefox, Internet Explorer or Safari.
- **PDF viewer:** course lecture modules and the readings are in a pdf format.
- Contact Student Help Desk for technological support: http://it.unt.edu/helpdesk
- **Tech skill required for students:** Students should be able to navigate the course on Canvas, follow the links to view video clips, and download the pdf documents.

**College of Merchandising, Hospitality & Tourism_Syllabus Statements_Spring, 2024 (posted on Canvas in a separate file).**