

## **RETL 4330: Consumer Analytics and Data Visualization**

### **TR 2-3:20 pm, Remotely on Zoom**

Dr. Bugao Xu, Chilton Hall 342J, Tel: (940) 369-8915  
Bugao.xu@unt.edu (Do not send email through Canvas)  
TA: Jinfeng Zhou, jinfengZhou@my.unt.edu  
Course website (Canvas): <https://unt.instructure.com/courses/40499>

### **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.

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: MDSE 3750**

**READINGS:** The course uses the combination of teaching method such as lecture, lab, case discussion, interactive activity and group projects. Reading include 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

### **Join Zoom Meeting**

<https://unt.zoom.us/j/94464047377>

Meeting ID: 944 6404 7377

One tap mobile

+13462487799,,94464047377# US (Houston)

+16699006833,,94464047377# US (San Jose)

### **SOFTWARE**

1. **Microsoft Office:** Available on the CMHT check-out laptops or through <https://it.unt.edu/hardware-software-info>. Your Office 365 EagleConnect account entitles you to receive five copies of Microsoft Office for your desktop and mobile devices at no cost!
2. **Tableau:** Advanced data analytical and visualization tool. Student license is available on the CMHT check-out laptops and/or through the following link.

- Download Tableau Desktop (TableauDesktop-64bit-2020-2-4.exe) and Tableau Prep (TableauPrep-2020-2-3.exe)
- Select each product download link to get started. When prompted, enter your school email address for Business E-mail and enter the name of your school for Organization.
- Activate with your product key: TCXC-72C3-DE00-9704-1EBB; Or go through the registration with UNT emails and education selections.
- 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/>

3. **Google Analytics:** <https://analytics.google.com> (free). Register it with your Gmail account.

#### GRADING POLICY

Assignments	Points
<del>Class Attendance</del>	<del>3 x 26 + 2 = 80</del>
In-class Assignments	10 x 12 = 120
Take-home Assignments	20 x 10 = 200
Team Project: create an interactive Tableau dashboard to be presented	100
1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> Exams	3 x 100 = 300
Final Exam (comprehensive)	200
Total	920

\*An in-class assignment (C1-C12) is due at 11:59pm on the class day; a take-home assignment (H1-H12) is due at the beginning (1:59pm) of the next class day.

- A: Total  $\geq$  90% (828);
- B: 90% > Total  $\geq$  80% (736);
- C: 80% > Total  $\geq$  70% (644);
- D: 70% > Total  $\geq$  60% (552);
- F: Total < 60%

- **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 their full credits. 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:

- ~~Class attendance is **mandatory** and will be checked at the beginning of each class. Please be punctual and remain until class is dismissed.~~
- ~~There will be 26 lecture classes. Each attendance will count for 3 points. 2 bonus points are given to the presentation attendances.~~
- ~~An excused absence will only be 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 materials during their absence of class.~~

**Tentative Agenda**

Week	Date	Topic	Online Module	Due
1	8/25	Introduction to class		
	Excel Pivot Table			
	8/27	Data format and PivotTable	Mod1	C1
2	9/1	Manage PivotTable	Mod2	
	9/3	Format PivotTables	Mod3	H1, C2
3	9/8	PivotChart and Macro	Mod4	
	9/10	Exam 1		
Tableau Essential				
4	9/15	Tableau Overview, Interface, Quick Viz	Mod5	H2, C3
	9/17	Connect Data and Export Workbook	Mod6	
5	9/22	Data Types and Manage Worksheet	Mod7	H3, C4
	9/24	Analyze Data	Mod8	
6	9/29	Sort and Filter Data	Mod9	H4, C5
	10/1	Groups, Sets and Hierarchy	Mod10	
7	10/6	Review and Project assignment		H5, C6
	10/8	Exam 2		
8	10/13	Charts	Mod11	
	10/15	Charts (2)	Mod12	H6, C7
9	10/20	Format Visualization	Mod13	
	10/22	Analytics (trend, reference, forecast, cluster)	Mod14	H7, C8
10	10/27	Map Geographic Data	Mod15	
	10/29	Dashboard and Story	Mod16	H8, C9
11	11/3	Review and in-class Practices		
	11/5	Exam 3		
12	11/3	Project Presentation		
	11/5	Project Presentation		Project Report
Google Analytics Essential				
12	11/10	Web Traffic and Metrics	Mod17	C10
	11/12	Google Analytics Account Structure	Mod18	
13	11/17	Google Analytics Interface and Functions	Mod19	H9, C11
	11/19	Understand Overview and Full Reports	Mod20	
14	11/24	Set up Goal and Campaign	Mod21	H10, C12
	11/26	Thanksgivings		
15	12/1	Dashboards, Final review	Mod22	
	12/3	Project Presentation		Project Report
16	12/10	Final exam, 1:30 pm - 3:30 pm		

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

**COURSE INFORMATION****Sending e-mail:**

Send all class related emails to [bugao.xu@unt.edu](mailto:bugao.xu@unt.edu). When sending e-mails, be sure to put "RETL 4330" and a brief reason why you are emailing in the Subject line.

**Student Perception of Teaching (SPOT)** is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you an opportunity to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SPOT to be an important part of your participation in this class.

#### MINIMUM TECHNOLOGY REQUIREMENTS

- **High-speed internet connection (DSL or a cable modem):** Your internet connection is critical for viewing videos available through the Media Library on Demand.
- **Internet Browser:** you can access Canvas using Google Chrome, Firefox, Internet Explorer or Safari
- **PDF viewer:** case studies and some of the readings are in a pdf format
- Contact [Student Help Desk](http://it.unt.edu/helpdesk) 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 Fall, 2020

#### COVID-19 Precautions

The College of Merchandising, Hospitality and Tourism abides by university policy regarding COVID-19 precautions. All rules and guidelines established by the university apply to CMHT courses. You can find regularly updated information on the UNT Return to Learn website: <https://vpaa.unt.edu/return>.

Some of the safety precautions we have put into place in the CMHT classrooms include:

- Social distancing in the classrooms
- Lowered in-person class capacity
- Hand sanitization stations in the Chilton hallways
- Gym etiquette in the classrooms – meaning that students will:
  - Clean your space prior to class. Plan to enter the classroom in time to do so. Cleaning materials are supplied for you.
  - Clean your space – and all surfaces you have touched – at the end of class. Your teacher will allow you time to do so.
- Reduced hallway seating to allow for social distancing

In order to maintain this protocol, students:

- Should not remove cleaning materials from the classrooms
- Should clean your space before and after class
- Should wear face coverings for the duration of class
- Be aware of social distancing while in the classroom and hallways
- Exercise patience as we work together as a CMHT family to discover what is working and what is not

If you have anxiety about attending face-to-face classes, alert your teacher now. We may be able to make an accommodation that reduces your anxiety and helps you be more ready to learn.

## Advising and Degree Progression

### Advising

**ALL** students are encouraged to meet with their Academic Advisor each semester to update your degree plan and to stay on track for a timely graduation.

- **CMHT Advising Contact Information (Chilton Hall 385 – 940.565.4635)**

### Prerequisites

- Ultimately, it is a student's responsibility to ensure they have met all prerequisites before enrolling in a class.
- A prerequisite is a course or other preparation that must be successfully completed before enrollment in another course. All prerequisites are included in catalog course descriptions.
- Students that lack prerequisites for a course are not allowed to remain in the course.

### Transfer Courses

Any transfer course(s) from another institution must receive *prior approval* from your CMHT Academic Advisor to ensure that the course(s) will be applicable to your degree plan at UNT.

### Dropped for Non-payment

- Students will be dropped for nonpayment for enrolled courses, parking fees, schedule change fees, etc. Please check your account daily through the 12<sup>th</sup> class day to ensure you have not been dropped for non-payment of any amount. It is the student's responsibility to make all payments on time.
- ***Students cannot be reinstated for any reason after the 12<sup>th</sup> class day regardless of situation.***

### Dropping a Course

- **A decision to drop a course may affect your current and future financial aid eligibility.** Talk to your academic advisor or Student Financial Services if you are thinking about dropping a course.
- Speak with the course instructor to discuss any possible options to be successful in the course before dropping.
- Meeting deadlines for dropping a course are the student's responsibility.
- **After the 12<sup>th</sup> class day, students cannot drop a course online** through your my.UNT Student Portal. Please see the instructions for dropping a class here:  
<https://registrar.unt.edu/regISTRATION/dropping-class>

### Financial Aid Requirements

- A student must maintain Satisfactory Academic Progress (SAP) to continue receiving financial aid by maintaining a minimum 2.0 cumulative GPA and successfully completing the required number of credit hours based on total registered hours per semester. Students cannot exceed attempted credit hours above 150% of their required degree plan. If a student does not maintain the required standards, the student may lose financial aid eligibility. Visit <https://financialaid.unt.edu/sap> for more information about financial aid Satisfactory Academic Progress.

### **What if You Are In Distress?**

The University has a number of resources that can be useful if you find yourself in need of help. Faculty and advisors can help direct you to resources; please note that any reports of sexual harassment, sexual assault, dating violence, or stalking must be reported to the UNT Dean of Students, per Texas law. Some resources you might consult are:

UNT Police	940-565-3000
Dean of Students	940-565-2648 or 940-565-2039
Counseling and Testing	940-565-2741
Student Health and Wellness Center	940-565-2333
Office of Disability Access	940-565-2333
Housing and Residence Life	940-565-2610
Substance Use and Resource Education Center	940-565-3177
Veterans Center	940-369-8021
Denton County Friends of the Family	940-387-5131
National Suicide Hotline	1-800-273-TALK
COVID Hotline – <a href="mailto:COVID@unt.edu">COVID@unt.edu</a>	844-366-5892

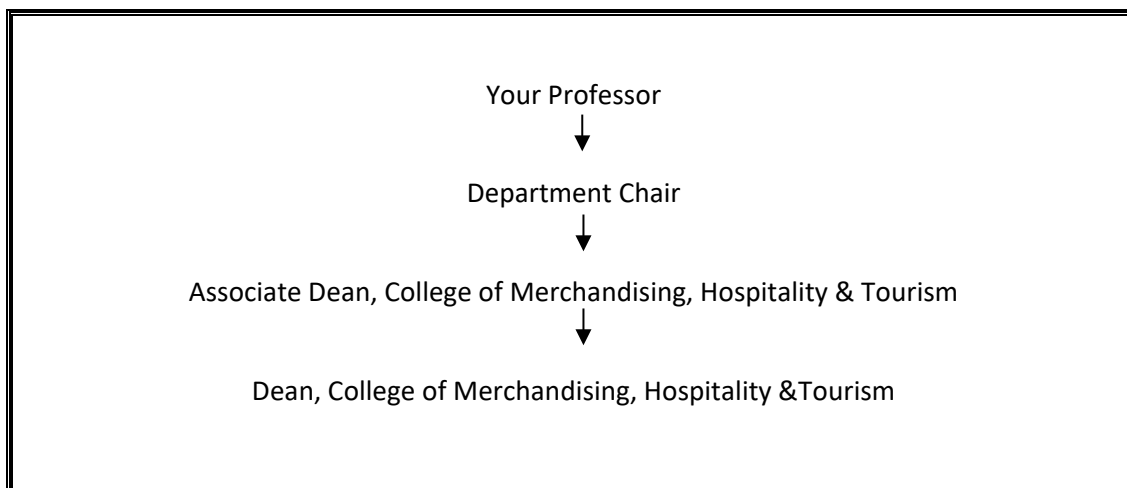
### **Dates and Deadlines**

August 24	First day of class
August 28	Last day for change of schedule other than a drop. (Last day to add a class.)
September 5	Census date –Students cannot be added to a course for any reason after this date.
September 7	Labor Day (no classes, University closed)
November 2	Last day for a student to drop a course and receive a W.
November 20	Last day to withdraw (drop all classes) and receive W's.
November 26-27	Thanksgiving Break (no classes, University closed)
December 2-3	Pre-finals days
December 3	Last class day
December 4	Reading day (no classes)
December 5-11	Final exams ( <b>Exams begin on Saturday</b> )

### **Grade and Class Concerns**

#### **Do you know who to contact for a course-related issue?**

Understanding the academic organizational structure is important when resolving class-related or advising issues. When you need problems resolved, please follow the steps outlined below:

**Do you require special accommodations?**

The University of North Texas and the College of Merchandising, Hospitality and Tourism make reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.

**Are you aware of safety regulations?**

Students are urged to use proper safety procedures and guidelines. In lab sessions, students are expected and required to identify and use property safety guidelines in all activities requiring lifting, climbing, walking on slippery surfaces, using equipment and tools, handling chemical solutions and hot and cold products. Students should be aware that the University of North Texas is not liable for injuries incurred while students are participating in class activities. All students are encouraged to secure adequate insurance coverage in the event of accidental injury. Students who do not have insurance coverage should consider obtaining Student Health Insurance for this insurance program. Brochures for this insurance are available in the UNT Health and Wellness Center on campus. Students who are injured during class activities may seek medical attention at the UNT Health and Wellness Center at rates that are reduced compared to other medical facilities. If you have an insurance plan other than Student Health Insurance at UNT, please be sure that your plan covers treatment at this facility. If you choose not to go to the UNT Health and Wellness Center, you may be transported to an emergency room at a local hospital. You are responsible for expenses incurred there.

**Do you know the penalties of academic dishonesty?**

Academic dishonesty includes, but is not limited to, the use of any unauthorized assistance in taking quizzes, tests, or exams; dependence upon the aid of sources beyond those authorized by the instructor, the acquisition of tests or other material belonging to a faculty member, dual submission of a paper or project, resubmission of a paper or project to a different class without express permission from the instructors, or any other act designed to give a student an unfair advantage. Plagiarism includes the paraphrase or direct quotation of published or unpublished works *without* full and clear acknowledgment of the author/source. Academic dishonesty will bring about disciplinary action which may include expulsion from the university. This is explained in the UNT Student Handbook. **Individual faculty should include penalties for academic dishonesty in their courses.**

**Class Recordings - COVID**

Synchronous (live) sessions may be recorded for students to refer to throughout the semester. Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action.

**Do you meet ALL expectations for being enrolled in a course?**

- CMHT students are expected to meet all prerequisites for the courses in which they are registered.
- Students are expected to be respectful of other students, guests, and faculty. Behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT.
- Students engaging in unacceptable behavior will be directed to leave the classroom and may be referred to the Dean of Students for possible violation of the Code of Student Conduct.
- UNT's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at [www.deanofstudents.unt.edu](http://www.deanofstudents.unt.edu).

The College of Merchandising, Hospitality and Tourism requires that students respect and maintain all university property. Students are accountable through disciplinary action for any intentional damages they cause in classrooms. (e.g., writing on tables). Disruptive behavior is not tolerated (e.g., arriving late, leaving early, sleeping, talking on the phone, texting or game playing, making inappropriate comments, ringing cellular phones/beepers, dressing inappropriately).

**Feedback and Communications**



**Image Release**

The College actively posts images and descriptions of class and student accomplishments. If you do not want your image posted on the CMHT website and/or social media sites, (1) you should avoid being in group photographs or in photographs taken by your teachers or the IT staff and (2) send an email to [TKinley@unt.edu](mailto:TKinley@unt.edu) and request that your name and image not be shared. Dr. Kinley will share this information with the IT staff and the faculty who post to social media. Faculty and staff are asked to honor your wishes without question.

**What is SPOT?**

The Student Perceptions of Teaching (SPOT) is a requirement for all organized classes at UNT. This short survey at the end of the semester gives students the opportunity to comment on the course. Student feedback is important and is essential as we strive for excellence. You will be able to access these surveys through your my.unt toward the end of the semester.

**Do you know the date/time of the final exam in this course?**

Final exams or other appropriate end of semester evaluations are administered at the designated times during the final week of each long semester and during the specified day of each summer term. *Please check the calendar early in the semester to avoid any schedule conflicts.*

**Do you know what you may be missing?**

Your access point for ALL business and academic services at UNT occurs within the <https://my.unt.edu> site, and EagleConnect is the official method of communication for UNT. If you do not regularly check EagleConnect or forward it to your favorite e-mail account, please do so to learn about job and internship opportunities, CMHT events, scholarships, and other important information. The website that explains EagleConnect and how to forward your email is: <https://it.unt.edu/eagleconnect>.

**Do you know what to do in an emergency or UNT closure?**

- UNT uses a system called Eagle Alert to quickly notify you with critical information in an event of emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). The system sends voice messages (and text messages upon permission) to the phones of all active faculty staff, and students. Please make certain to update your phone numbers at <https://my.unt.edu>.
- Some helpful emergency preparedness actions include: 1) ensuring you know the evacuation routes and severe weather shelter areas, determining how you will contact family and friends if phones are temporarily unavailable, and identifying where you will go if you need to evacuate the Denton area suddenly.

- In the event of a university closure, your instructor will communicate with you through Canvas regarding assignments, exams, field trips, and other items that may be impacted by the closure.

**FACULTY - SPECIFY HERE HOW YOU WILL CONTACT STUDENTS and CONTINUE WITH THE CLASS.**

## Career Resources

### Resume Help

For one-on-one help with your resume or other job-search skills, Ms. Janice Lader, from the Career Center and also one of our CMHT 2790 (Career Development) instructors, will be available to you. Contact her at [Janice.Lader@unt.edu](mailto:Janice.Lader@unt.edu) to set up an appointment.

### Career Center

The Career Center is currently located in Sage Hall. They provide **\*free\*** help with resumes, interview skills, business cards, professional portraits, etc. They also host several recruiters throughout the year and host job fairs.

### Internship / Career Industry Contact Opportunities

- In the fall semester, watch for information about the **Executive in Residence (EIR) Lecture**. This is an opportunity to hear about innovative industry and network with CMHT Board members and speakers. In Fall 2020, if we have an EIR event, it will be virtual.
- Also in fall, look for the **MDR Career Expo**, which provides opportunities to talk with recruiters and maybe interview on the spot! There may also be an opportunity to have lunch with recruiters.
- In the spring semester, watch for information about the **Consumer Experience Symposium**. The format will be similar to the EIR in that it affords you an opportunity to hear directly from industry and network with Board members and speakers.
- Spring semester also brings the **HTM Career Expo**, where our industry recruiters come to campus to visit with you!
- **CMHT Student organizations** bring industry opportunities to campus in their monthly or bi-monthly meetings. Join them and participate!
- We sometimes have an **Industry Partner of the Day** set up in the hallway near the advising offices. For Fall 2020, these will be virtual. These may be publicized in your classes and are posted on the bulletin board in that Chilton hallway.

### Online Job Board and Social Media Sites

- <https://cmht.unt.edu/jobs>
- Facebook CMHT Careers Group - <https://www.facebook.com/groups/CMHTCareers/>
- LinkedIn - <https://www.linkedin.com/in/unt-cmht-2023b8173/>
- Twitter - @UNTCMHT
- Facebook Social Site - @UNTCMHT and @UNTHTM

- Instagram - @untcmht

## IT Resources

### **CMHT-IT Services Student Laptop Checkout Information**

The CMHT-IT Services desk located on the 3<sup>rd</sup> floor of Chilton Hall outside room **386** will have Dell laptops available for checkout for all UNT students. These laptops and the CMHT-IT Services desk will be available during the following hours:

Monday: 8:00AM – 9:00PM  
Tuesday: 8:00AM – 9:00PM  
Wednesday: 8:00AM – 9:00PM  
Thursday: 8:00AM – 9:00PM  
Friday: 8:00AM – 5:00PM

These Dell laptops can be checked out at any point during the above hours and must be returned on the same business day to the CMHT-IT Services personnel. These laptops must remain on campus and will **not** save your data. So be sure to use a USB or email yourself to save your work!

For more information, please stop by the CMHT-IT Services desk or visit us at <https://cmht.unt.edu/cmht-it-services> or give us a call at (940) 565-4227.

### **CMHT Virtual Lab**

UNT Students currently enrolled in a CMHT course have access to the CMHT Virtual Lab provided by VMware Horizon View virtual desktop system. This is useful if your course requires specific software and you need access to the software on your personal machine. You can find more information and installation steps here: <https://cmht.unt.edu/vmware-virtual-lab>. The CMHT-IT Services desk can assist you with installing the VMware client on your personal machine. Please see above hours of operation for our IT services desk.

## Additional Information

### **Are You An F-1 Visa Holder?**

- To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component must be approved in advance by the instructor and can include activities such as taking an on-campus exam, participating in multiple on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.
- If such an on-campus activity is required, it is the student's responsibility to do the following:

- (1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
  - (2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Advising Office. The UNT International Advising Office has a form available that you may use for this purpose.
- Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, students should contact the UNT International Advising Office (telephone 940-565-2195 or email [international@unt.edu](mailto:international@unt.edu)) to get clarification before the one-week deadline.