OVERVIEW

This course explores the fundamental concepts and principles that underlie techniques for extracting useful information and knowledge from digital communication data. The primary goal of the course is to help you come to view problems from a data perspective and understand how to systematically and critically analyze such problems. Data-analytic thinking can be applied in a variety of ways, from social media marketing and analysis to customer relationship management, strategic communication through the field of public relations and advertising, to data-driven decision-making and much more.

Throughout this course it is critical that students come to an understanding of the nature of data and its significance for society. With this in mind, the course will focus on introducing technical data
skills (acquire, manage, analyze, & use) within both a social and societal context.

By the end of this course you should be able to:
1. Demonstrate an understanding of the history and role of professionals and institutions shaping the digital analytics and communications industries.
2. Think critically, creatively, and independently to solve problems
3. Conduct research and evaluate data appropriate for communication professionals
4. Understand concepts and apply theories in use and presentation of images and information.
5. Write correctly and clearly in forms and style appropriate for the communications professions, audiences, and purposes they serve
6. Apply tools and technologies appropriate for the profession

PHILOSOPHY

This course will be applied and interactive. Because most students enrolled in this course lack sufficient experience with various techniques, programs or languages, and platforms, “Homework Help Guides” will accompany assigned work. These guides have been developed to integrate and facilitate students’ simultaneous learning of analytical concepts and techniques, and the application of the requisite tools critical to digital communication analysts. As students you are encouraged to apply your real-world professional experience to the learning process throughout the course. Further, any previous coursework in business-related fields such as sales and marketing or advertising, and in human behavior, such as sociology, psychology, and social psychology will be immensely useful as you build your skills in analytical thinking and practice these new techniques.

PREREQUISITES: Graduate standing.

COURSE STRUCTURE:
This online course consists of pre-recorded lectures, readings, discussions, writing assignments, and weekly check-ins with the instructor. The lectures will introduce the principles, tools, and professional applications of digital communication analytics. Pre-recorded lectures from developers of various analytics tools will supplement the instructor’s lectures. Other course activities are opportunities to apply those principles and tools. Students will learn how to collect and translate digital content into data that can be used to enhance decision-making by marketers, advertisers, and public relations and social media professionals, as well as many others. Students are required to keep up with readings and recorded lectures, to turn in all assigned work on time, and actively engage in the four Blackboard forum discussions. Your final grade is based on the total score of 1,000 possible points allocated to the following: six written assignments, eight weekly check-ins, four discussions, and student portfolio with E-lab book.

<table>
<thead>
<tr>
<th>Blackboard student portfolio w/E-lab book</th>
<th>(70)</th>
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<tbody>
<tr>
<td>Student Data Analysis &amp; Presentation</td>
<td>(150)</td>
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<tr>
<td>Data Visualization Analysis &amp; Revision</td>
<td>(100)</td>
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<tr>
<td>Dataset Analyses &amp; Diagnoses 4 @100pts ea</td>
<td>(400)</td>
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<tr>
<td>Blackboard student forum- 4 @ 50pts ea</td>
<td>(200)</td>
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<tr>
<td>Weekly Check-ins with instructor 8 @ 10pts ea</td>
<td>(80)</td>
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<td>1000 points</td>
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**REQUIRED READINGS: All reading assignments in Blackboard.**


*Additional required readings provided in Blackboard.*

**COURSE POLICIES**

**Attendance**

This course is 100% online with specific due dates that must be met regardless of whether or not the university campus is open or closed. This is not an independent study course. A fundamental aspect of online instruction is the expectation and requirement that students coordinate their coursework requirements with their personal and professional schedules and obligations. Failure to meet course obligations will result in loss of points and potentially dissatisfactory course status.

Students are expected to submit all coursework by the due date. Unless otherwise stated by the instructor, all assignments are to be uploaded in Blackboard by 11:59 pm on the due date.

All assignments and written work must be submitted in a .doc, .docx, or the open source Libre Office’s .odf file type. No other file types will be accepted unless otherwise stated by the instructor. A first violation of this policy will result in a 50% deduction of the total value of the assignment before grading begins. Any further violations will result in a grade of “0” and the assignment will not be graded. All written work should be typed in 12-point New Times Roman font and double-spaced unless otherwise indicated by the instructor.
Academic Fraud and Dishonesty

Honesty, integrity, and professionalism are essential to success in business and academic environments. Because of the potential for grievous consequences connected with dishonesty, fraud, or misrepresented work products in the field of analytics, serious repercussions are mandated for students who choose to cheat, deceive, misrepresent or misappropriate materials, ideas, or content for their own work.

Therefore, to minimize the opportunity for such behavior while providing students with the chance to recognize borderline or questionable choices, Turnitin, the Internet-based plagiarism prevention service will be used in this course to verify and validate all work. Students will have an opportunity to correct suspect any content identified by Turnitin in their written work. Students should therefore not wait until 15 minutes or less before submitting any assignment as it will have to be processed and screened by the service before it is posted in Blackboard. Students are responsible for the content of their work once it is posted in Blackboard.

Students suspected of committing academic fraud on the first offense will be subjected to the full discipline of the Mayborn School of Journalism, The Toulouse Graduate School and the University of North Texas. The University of North Texas’ policy on academic fraud is available at https://policy.unt.edu/sites/default/files/06.003_StudentStandardsOfAcademicIntegrity_8_2017.pdf. It is a condition of enrollment and participation in this course that all students will read this policy, understand and accept the policy.

Netiquette

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

Here are some important netiquette guidelines from UNT CLEAR:
• Remember you are communicating with a human being.
• Behave online in the same way that you would in-person.
• Communication in the online classroom is different from other places in cyberspace.
• Respect other's time and bandwidth: be concise.
• Make yourself look good by using proper grammar and punctuation.
• Share your knowledge.
• Keep flame wars from escalating.
• Respect the privacy of your classmates.
• If you have advanced IT skills, don't abuse your power.
• Be kind when addressing others' mistakes.
• Follow the Golden Rule

For more information, see https://www.untdallas.edu/sites/default/files/page_level2/ajc0262/pdf/brochure_netiquette.pdf

COURSEWORK

Student Dataset Analyses & Diagnoses (4 for 400 points total)

During the course, each student will work with 4 datasets provided by the instructor in order to construct a brief diagnosis for each dataset. (maximum of 1-page single spaced). Once each assignment is completed by the class, during the following week class discussion will be opened to facilitate understanding of the problems and solutions provided by students as well as other alternatives. Because each week of the course brings a new module and new topics, each analysis and diagnosis assignment topic will differ. Each assignment’s grade will be broken down into two parts: 100 points for the analysis and diagnosis and 50 points for participating in the following week’s discussion. Guidelines for each analysis and diagnosis will be provided in Blackboard for each dataset. Guidelines for the discussions can be
found in the syllabus under “Class Discussion of Student Dataset Analyses & Diagnoses.”

Upcoming topics are as follows:

Week two, Assignment 1: making inferences and producing insights from data

Week three, Assignment 2: data quality

Week five, Assignment 3: working with data visualizations

Week six, Assignment 4: developing data-based recommendations

Student Data Analysis & Presentation (150 points)

During the course, each student will develop their analytical and critical thinking skills as well as their ability to present analytical findings to non-analyst stakeholders by reviewing and analyzing either a case study or a dataset. Students will then present their findings through a written report as well as a live or pre-recorded 10-15-minute presentation of their findings. The student may choose whether to pre-record their presentation or to gain the experience of a live presentation before stakeholders. Since this assignment is intended to hone your professional analytical skills, you must prepare and present your analysis as if you are presenting results to a client. It is therefore essential that your presentation makes use of simple and easy to interpret/read data visualizations and that the overall language used in the presentation is easy to understand by non-analysts.

Project considerations when analyzing the data:

1) What immediately ‘grabs’ you in the data? What secondary impressions do you get beyond any immediately apparent observations? Ultimately, what are the takeaways you can find in these data?
2) Which metrics would you identify as being most critical to examine in this case or for these data?
3) Identify both the best and worst performers. Describe how you could apply your findings to a future campaign.

*Presentation Guidelines:*

1) All presentations, whether live or pre-recorded, should be no less than 10 minutes and no more than 15 minutes.

2) All presentations should be prepared using Power Point or open source software Libre Office Suite’s presentation program called Impress, which can be found at [https://www.libreoffice.org/discover/impress/](https://www.libreoffice.org/discover/impress/). Presentations should consist of 6-8 slides including 1 cover slide and 1 reference slide. The other 4-6 slides should include the following content: summary of the problem with the case or dataset, outline of your conclusions, and an explanation of how you arrived at those conclusions, and at least 1 data visualization.

Students presenting live instead of via recording should be careful to schedule their presentation time, no later than October 13th by 5pm, to occur sometime during the final week of the course, between October 16 and October 20.

**Data Visualization Analysis & Revision (100 points)**

Because the ability to create effective data visualizations is a key skill of any good analyst, students will be challenged to identify a poor quality data visualization. Students will prepare a 1-page single-spaced report containing the following: 1) An explanation detailing specific reasons why the visualization could be considered to be of poor quality; and, 2) A description of how the information contained in the data visualization
could better be represented for consumption of stakeholders; and, 3) A visualization created to meet the description from #2 of how to create a more effective data visualization.

**Blackboard Weekly Activities**

**Student Portfolio and E-lab book (70 points)**

To support students’ active learning of programs and analytical techniques as well as future career ambitions, all students will be expected to create a professional portfolio. Code, coding comments, why steps were taken and the results of those steps, as well as any diagrams or other content that students use in their programming and analyses should be saved as an E-lab book in the form of a Google docs document, which in turn should be saved in a Google Drive folder. A student’s E-lab book should be saved in the following example format: “Johnson, Susan JOUR 5000 E-lab book.” At weeks four and eight of the course, students are required to share this folder with the instructor for grading and feedback purposes. Successfully completing the E-lab book is a condition of passing the course. Examples of E-lab books will be available on Blackboard for students to review.

**Class Discussion of Student Dataset Analyses & Diagnoses (4 for 200 points total)**

During the week following the submission of each of the Analyses and Diagnoses assignments, the class will participate in a discussion of some of the problems and solutions that students provided in their work. This is intended to promote students’ thinking and decision-making concerning the application of analytic techniques to their current or intended future careers. *There are two requirements for this forum.* First, each student must post a minimum of 100 words and a maximum
of 200 words in response to the instructor’s posted material. This is called the “Applied post” and should be so labeled by each student every week. The Applied post should respond critically to the points or questions posed by the instructor.

Use APA style references and in-text citations to support your ideas. The second part of each weekly post means that each student must respond to at least one fellow student’s Applied post. This response post, should be labeled, “Critique post” and should be a minimum of 100 words and a maximum of 200 words in which the student evaluates (using his or her professional experience, and if so desired, references using APA style references and in-text citations of scholarly, professional, or trade publications as support) the other student’s Applied post. Bear in mind that references are not part of the word count. Examples of critiquing include explaining how they would improve on the fellow student’s applied post recommendations and why or noting what alternatives might be tried/implemented and why. Statements such as "I agree with X" or "I found the X very interesting" are meaningless and are unacceptable for any assignments in this course. You must provide specific evidence that shows why you feel or think as you do.

Creativity will be rewarded as will critical thinking and original solutions. Each student’s critique post is due by 11:59pm Sunday. If students do not complete the forum requirements, they will not receive full credit for the written assignment tied to the forum nor will they received credit for the forum. Because there are only 4 analysis and diagnosis assignments, there will only be four discussion forums:

<table>
<thead>
<tr>
<th>Due Dates</th>
<th>Applied Posts</th>
<th>Critique Posts</th>
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</thead>
<tbody>
<tr>
<td>Forum #1: (MODULE 3)</td>
<td>9/13</td>
<td>9/17</td>
</tr>
<tr>
<td>Forum #2: (MODULE 4)</td>
<td>9/20</td>
<td>9/24</td>
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Weekly Check-ins (8 for 80 points total)

Because research studies conducted on online education consistently reveal that distance education students typically feel isolated and alone, this course makes use of weekly GoTo Meeting video chats between each student and the instructor. Also, budding analysts benefit greatly from personal mentoring, and these personal weekly meetings enable student empowerment. Each week students are expected to contact the instructor via the permanent link https://www.gotomeet.me/ValarieBell during Thursday office hours (9-11am), or by emailing the instructor to arrange their regular weekly meeting. During each check-in the student will apprise the instructor of the following: 1) their progress in the course thus far; 2) any worries or concerns about the coursework and requirements for it; 3) the need for individual tutoring; 4) personal emergencies or issues that may hinder the student’s ability to successfully complete all coursework on time as assigned; 5) additional resources or assistance the student may require; and, 6) any other issues as needed. Students will be awarded points for meeting this requirement. Students who fail to fulfill all eight check-ins will lose points. Also, students who complete all check-ins may be granted consideration if they are reasonably close to the next higher letter grade. **Students should email the instructor by August 30, 2017 at 5pm to arrange their weekly check-in time.**

COURSE RESOURCES

Online

Keeping current in your industry, with analytics trends, and the latest tools is critical to your future success as an analyst. Here are some of
the resources available.

PowerPoint Presentations:
http://www.lifehack.org/articles/technology/10-tips-for-more-effective-powerpoint-presentations.html

Google Analytics Academy:
https://analyticsacademy.withgoogle.com/explorer

Occam’s Razor: http://www.kaushik.net/avinash/
Analytics Talk: http://cutroni.com/
Online Behavior: http://online-behavior.com

Advertising/Marketing Field

Advertising Age: http://www.adage.com
Ad Exchanger: http://www.adexchanger.com
Ad Week: http://www.adweek.com
eMarketer: http://www.emarketer.com
Mediapost: http://www.mediapost.com
MarketBridge: http://www.the-digital-bridge.com

Social Media

Allfacebook: http://allfacebook.com
Inside Facebook: http://www.insidefacebook.com
Twitter’s Blog: http://blog.twitter.com

Technology Field

Tech Crunch: http://www.techcrunch.com/
COURSE SCHEDULE  
(SUBJECT TO CHANGE BY INSTRUCTOR)

Blackboard student forum posts introductions  
Weekly check-in due between Thursday, 8/31 & Friday, 9/1 via GoTo Meeting

9/4 WEEK TWO/MODULE TWO: video lecture: “Digital Metrics”  
Metrics introduction  
Metrics vs. KPIs  
Metrics: Email, Social, Display, Website  
*Live introduction to analysis & inferences/insights demonstration on Go To Meeting 9/4 @10am.  
**Analysis & Diagnosis Assignment 1: making inferences and producing insights from data due 9/10**  
Weekly check-in due via GoTo Meeting

9/11 WEEK THREE/MODULE THREE: video lecture: “The How-to’s of Data Analysis & Data Visualizations”  
This is where steps to data analysis comes in etc.  
Introduction to Data Visualization & Addressing Client Questions  
Effective & Accurate Visualizations  
Problematic Visualizations: How to Spot them & Avoid them  
Introduction to Data Visualization Tools  
*Live visualization/analysis demonstration on Go To Meeting 9/11 @10am.  
**Analysis & Diagnosis Assignment 2: data quality due 9/17**  
Blackboard student forum #1 FOR ASSIGNMENT #1  
Weekly check-in due via GoTo Meeting

9/18 WEEK FOUR/MODULE FOUR: video lecture: “Website & Display Analytics”  

VJ Bell, Ph.D. Jour 5000 Fall 2017
Website Analytics w/Datasets
Display Analytics w/Datasets
Display Advertising
Introduction to A/B Testing & Multivariate Testing
Introduction to Data Collection Tools for Websites & Display Analytics
*Live assignment demonstration on Go To Meeting 9/18 @10am.

Assignment: **Data Visualization Analysis & Revision due 9/24**
 Students must share their Google Drive E-lab book due 9/29

Blackboard student forum #2 FOR ASSIGNMENT #2
Weekly check-in due via GoTo Meeting

**9/25 WEEK FIVE/MODULE FIVE:** video lecture: “Email Analytics”
Overview of Email
Email Analytics w/Datasets: Enron email Dataset→
http://www.cs.cmu.edu/~enron/
Email Services
Introduction to Data Collection Tools for Email Analytics
*Live assignment #3 demonstration on Go To Meeting 9/25 @10am.

**Analysis & Diagnosis Assignment 3: working with data visualizations**
Weekly check-in due via GoTo Meeting

**10/2 WEEK SIX/MODULE SIX:** video lecture: “Social Media Analytics”
Social Analytics w/Datasets: Twitter BU master dataset
FB, Twitter, LinkedIn, & other Formats
Pros & Cons of Social Media Data
Social Media: Psychology & demographics of Users and behavior
Introduction to Data Collection Tools for Social Media Analytics
*Live assignment #4 demonstration on Go To Meeting 10/2 @10am.

**Analysis & Diagnosis Assignment 4: developing data-based recommendations**
Blackboard student forum #3 FOR ASSIGNMENT #3
Weekly check-in due via GoTo Meeting

**10/9 WEEK SEVEN/MODULE SEVEN:** video lecture: “Metric Frameworks, & Dashboarding”
Assignment: **Free week to work on Student Data Analysis Assignment**
Blackboard student forum #4 FOR ASSIGNMENT #4
Weekly check-in due via GoTo Meeting

10/16 WEEK EIGHT/MODULE EIGHT: video lecture: “Attribution & Marketing ROI”
Introduction to Attribution
Attribution: Identifying challenges & recognizing opportunities
Measuring Marketing ROI & Critical Challenges
Assignment: Student Data Analysis & Presentation Due — presentations will be staggered throughout the week. Report due by Sunday.
Students must share their Google Drive E-lab book by Friday, 10/20
Final Weekly check-in due via GoTo Meeting