

**Communication #4558 (Spring, 2017)**  
**Social Media Analytics**  
**The Ohio State University**

**Course Instructor**

Joseph Bayer, Ph.D.

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*Include 4558 in Subject*

**Office Hours**

Wednesdays and Fridays

2:00-3:30 PM

*Or by Appointment*

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**Course Description**

This course represents an introduction to analyzing social media data with an emphasis on the implications for communication strategy and industry research. How do we know whether an online marketing campaign worked? What type of consumers are most likely to buy a given product? How does the perception of a given company change after a big event? Social media streams can provide valuable insights into brand strategy, market research, and audience analysis. The course is composed of two primary parts: (1) an overview of key practices, techniques, and challenges associated with social media analytics, and (2) an involved group project in which you will apply the knowledge gained in the first half to a self-determined research problem.

**Course Objectives and Outcomes**

The primary objectives of this course are to teach students how to obtain, monitor, and evaluate digital traces from online platforms. When we are finished, you will be prepared to approach future problems with an understanding of how social media data can help. You will learn the advantages/disadvantages of using social media data, how to operate an established analytics platform, how to collect data from Twitter directly, and complete a novel research project using real world social media data. In addition, you will know how to complete written research reports and oral presentations using digital data traces. Altogether, you will develop the core knowledge and skills needed to use social media data to answer practical questions.

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## Course Materials

Three contemporary and complementary books on social media analytics will be used throughout the semester. Students are required to purchase ALL three books and follow the reading schedule on the syllabus carefully. The reading list is designed to balance the practical application of research in the modern industry environment with the theoretical and methodological rigor required in academic communication research.

First, combining business and academic perspectives, Lutz Finger (LinkedIn) and Dr. Soumitra Dutta's (Cornell University) *Ask, Measure, Learn* will provide insights into the communication strategies and theoretical requirements required for conducting robust analytics.

- (1) Finger, L. & Dutta, S. (2014). *Ask, Measure, Learn: Using Social Media Analytics to Understand and Influence Customer Behavior*. Sebastopol, CA: O'Reilly.

Second, Matthew Russell's (Digital Reasoning) *Mining the Social Web* represents a proven introduction to extracting data directly through the dominant social media platforms.

- (2) Russell, M. A. (2013). *Mining the Social Web: Data Mining Facebook, Twitter, LinkedIn, Google+, GitHub, and More*. Sebastopol, CA: O'Reilly.

Finally, dual academic and consultant Dr. Gohar Khan's (University of Waikato, NZ) recent textbook offers a ground level view of working with social media data, supplementing the primary readings above and providing the sample data sets used for in-class activities.

- (3) Khan, G. F. (2015). *Seven Layers of Social Media Analytics: Mining Business Insights from Social Media Text, Actions, Networks, Hyperlinks, Apps, Search Engine, and Location Data*. Paramount, CA: Amazon CreateSpace.

In addition to the required books, you will be required selected journal articles that will be posted to the course Canvas/Carmen site, as well as use a number of platforms for the purpose of learning and conducting social media analytics over the semester:

1. Canvas (for class materials)
2. Top Hat (for in-class activities)
3. Crimson Hexagon (for data analytics)
4. Slack (for team projects)

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## Course Format

The course is composed of two weekly classes. On most days, classes will be composed of a lecture paired with computer-based activities as individuals or within small groups.

## Requirements

(1) *Attendance/participation (20 pts.)*. A participation grade will be assigned at the end of the course based on your attendance and active participation in class activities. Note that attendance will be taken each lab. Students will be allowed TWO absences for personal matters during the semester. For each unexcused absence after that, you will lose 1 point for every missed class.

(2) *Individual Research Proposal (10 pts.)*. You will hand in a one-page proposal concerning a potential group research project. You will lose a letter grade for everyday that it is late. If the submission is late by more than two days, you will receive zero points.

(3) *Midterm (25 pts.)*. The course midterm examination will cover all material in the first half of the course (prior to Spring Break). This exam, which will take place on Thursday, March 9<sup>th</sup>, will be the one multiple choice exam during the semester.

(4) *Group Research Proposal (10 pts.)*. You will be assigned to a group and based on the topic of your individual research proposal. As a group (4-5 students), you will identify and design a new research proposal that will serve as the basis of your group research report.

(5) *Group Research Report (25 pts.)*. You will complete a research report (10-12 pages not including references) that employs at least one of the methods covered in the course. It should answer a question tied to social media analytics and you are encouraged to be creative and come up with your own topic. I will provide more details and guidelines about the research design proposal at various points during the semester. Toward the end of the semester, I will reserve three class periods for groups to work on their project during the normal class time. During these open class periods, I will meet with each group individually and answer any questions or concerns that come up in analysis. A complete draft of the report will be submitted prior to group presentations as indicated on the course schedule. The report will be resubmitted during finals week as the course final with additional adaptations based on draft feedback.

(6) *Research Presentation (10 pts.)*. You will give a 15-minute presentation of your group research report in front of the class. Make-up presentations will be arranged for excused or unavoidable circumstances only (e.g., deaths, personal/family illness, emergencies) with written verification. If you miss your presentation due to an unexcused absence, you will receive zero points.

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## Course Policies and Procedures

Students are expected to act responsibly and abide by the following policies:

All cell phones must be silenced during class. Students must refrain from reading the newspaper, texting, listening to headphones, e-mailing, or using the Internet during class unless it is part of the lecture. Students may be asked to leave class for such behaviors. Any form of audio or video recording is ***not*** allowed in class. Students are also not permitted to take pictures of the projection screen. The instructor does ***not*** give permission for the lecture sessions to be recorded (in either an audio or video format). Course resources will be posted on Carmen. However, you will need to attend classes regularly to complete the course requirements.

Academic misconduct will not be tolerated on any occasion. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct: <http://studentlife.osu.edu/csc/>. Final papers and research proposals will be submitted to turnitin.com. Work that has been submitted to other courses will count as plagiarism even if you were the originator of that work.

The School of Communication at The Ohio State University embraces and maintains an environment that respects diverse traditions, heritages, experiences, and people. Our commitment to diversity moves beyond mere tolerance to recognizing, understanding, and welcoming the contributions of diverse groups and the value group members possess as individuals. In our School, the faculty, students, and staff are dedicated to building a tradition of diversity with principles of equal opportunity, personal respect, and the intellectual interests of those who comprise diverse cultures.

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>

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## Course Grading

At the end of the course, dividing your total number of points by 100 will yield your final course grade percentage. Letter grades will be assigned using the following grading scheme.

93 - 100 (A)  
90 - 92.9 (A-)  
87 - 89.9 (B+)  
83 - 86.9 (B)  
80 - 82.9 (B-)  
77 - 79.9 (C+)  
73 - 76.9 (C)  
70 - 72.9 (C-)  
67 - 69.9 (D+)  
60 - 66.9 (D)  
Below 60 (E)

Graduating seniors (and other students) who “need” this course to graduate should work especially hard to ensure that they will pass this course. To be fair to all students in the class, there will *not* be opportunities for students to re-complete assignments in order to raise their grades. *It is the student’s responsibility* to ensure that he or she receives a passing final grade by working diligently and responsibly throughout the semester. *Exceptions will not be made.*

This syllabus is an agreement between the instructor and the student. Events that transpire over the semester may require me to modify the syllabus. In the event I need to modify the syllabus, I will announce the modification in class. However, it is your responsibility to keep up with any such modifications and be aware of current policies, deadlines, etc.

By staying enrolled in this class, the student agrees to abide by the policies described above.

| Week    | Day                    | Class Schedule                      | Readings          |
|---------|------------------------|-------------------------------------|-------------------|
| Week 1  | Wednesday, January 11  | Welcome                             | You               |
| Week 1  | Friday, January 13     | What and Why Analytics?             | F&D Intro         |
| Week 2  | Wednesday, January 18  | Marketing Analytics                 | F&D Chapter 1     |
| Week 2  | Friday, January 20     | Sales Analytics                     | F&D Chapter 2     |
| Week 3  | Wednesday, January 25  | Public Relations                    | F&D Chapter 3     |
| Week 3  | Friday, January 27     | CRM and Market Research             | F&D Chapter 4, 5  |
| Week 4  | Wednesday, February 1  | Developing Research Questions       | F&D Chapter 8     |
| Week 4  | Friday, February 3     | Data Collection and Selection       | F&D Chapter 9     |
| Week 5  | Wednesday, February 8  | Types of Social Media Data          | Khan Chapter 1    |
| Week 5  | Friday, February 10    | Measurement and Metrics             | F&D Chapter 10    |
| Week 6  | Wednesday, February 15 | <b>SOLO PROPOSALS DUE</b>           |                   |
| Week 6  | Friday, February 17    | Hyperlink and Search Analytics      | Khan Chapter 7, 9 |
| Week 7  | Wednesday, February 22 | Text Analytics                      | Khan Chapter 3    |
| Week 7  | Friday, February 24    | Network and Action Analytics        | Khan Chapter 4, 5 |
| Week 8  | Wednesday, March 1     | Location and Mobile Analytics       | Khan Chapter 8, 6 |
| Week 8  | Friday, March 3        | <b>GROUP PROPOSALS DUE</b>          |                   |
| Week 9  | Wednesday, March 8     | Challenges and Obstacles            | F&D Chapter 6, 7  |
| Week 9  | Friday, March 10       | <b>MIDTERM EXAM IN CLASS</b>        |                   |
| Week 10 | Wednesday, March 15    | <b>SPRING BREAK</b>                 |                   |
| Week 10 | Friday, March 17       | <b>SPRING BREAK</b>                 |                   |
| Week 11 | Wednesday, March 22    | Learning Python                     | You               |
| Week 11 | Friday, March 24       | Coding and Mining Data              | Russell Preface   |
| Week 12 | Wednesday, March 29    | How to Mine Twitter                 | Russell Online    |
| Week 12 | Friday, March 31       | Mining Twitter in Python            | Russell Chapter 1 |
| Week 13 | Wednesday, April 5     | Group Projects (1)                  | You               |
| Week 13 | Friday, April 7        | Group Projects (2)                  | You               |
| Week 14 | Wednesday, April 12    | Group Projects (3)                  | You               |
| Week 14 | Friday, April 14       | Group Projects (4)                  | You               |
| Week 15 | Wednesday, April 19    | <b>DRAFT REPORTS DUE IN CLASS</b>   |                   |
| Week 15 | Friday, April 21       | <b>GROUP PRESENTATIONS</b>          |                   |
| Week 16 | Wednesday, April 26    | <b>FINAL REPORT DUE AT MIDNIGHT</b> |                   |