

ENGR 410 Social Media for Scientists and Engineers

Units: 2

Section: 28527R

Spring 2018: M, W; Time: 2:00 PM – 2:50 PM

Location: WPH B26

Instructor: Sarah Mojarad

Office: DRB 212

Office Hours: By appointment

Contact Info: Mojarad@usc.edu (reply within 24 hours)

Course Description

This course is an introduction to the various ways in which social media and science are intersecting in a compelling manner. New technologies and online communities are powerful tools that are changing the ways in which scientists and engineers are engaging one another (inreach) and general audiences (outreach). Through a series of case studies, students examine issue-based examples that address the complexities surrounding ethics, privacy, reputation management, ownership, and the law. Assignments, including weekly discussion board posts, focus on the development and understanding of appropriate usage of social media for personal and professional development. Distinguished guest lecturers provide additional insights from their experiences as practitioners of the topics presented.

Learning Objectives

Participants will learn:

1. To utilize social media in meaningful ways to disseminate scientific information
2. How to successfully communicate with STEM and non-STEM communities
3. The positive and negative impacts of social media illustrated via case studies
4. The impact of social media on personal and professional branding
5. How social media is changing the peer-review process and publishing landscapes
6. Issues concerning social media ownership, privacy, law, and ethics
7. The importance of developing a personal and professional brand
8. To maintain a professional, online identity and reputation
9. To analyze a social media presence and evaluate the strengths and weaknesses

Technological Proficiency and Hardware/Software Required

Web access is required. Readings and assignments are available on a week-to-week basis via course website on Blackboard.

This course contains audio materials, and in some cases, you may be required to record audio for homework assignments. Using a basic headset or the recording feature on your computer/cell phone is acceptable. Headsets can be purchased through the USC bookstore or on vendors such as Amazon.com.

Required Readings and Supplementary Materials

Required readings and supplementary materials are provided on Blackboard. This course does not have a required textbook for purchase.

Description and Assessment of Assignments

Participation 5%: Class participation is mandatory and expected. While lectures will be posted online, key components of this class are: (i) in-class discussions, and (ii) guest lectures that require in-person attendance and participation in discussions with the guest speakers.

Discussion Board 10%: Each week, students are asked to engage in discussion board conversation with their peers. Following lecture on Tuesday, students will have access to one or two weekly discussion board questions via Blackboard. Initial responses are due prior to class (2:00 PM) on Thursday. Follow up responses to peers (3 per question) are due by Sunday at 11:59 PM. After the deadline, work will be considered late and penalized by 50%. Discussion board posts that are more than a week late will receive no credit.

Assignments 40%: There are four assignments in this course. The goal of these assignments is to connect concepts and ideas learned in class to your own experiences and observations using social media. Each assignment is worth 10% of your final grade. Late assignments will be accepted for credit with prior approval from the instructor.

- **Assignment 1 – Improving Wikipedia: Opportunities in STEM Communication for Students**
 - **Overview:** The goal of this exercise is for students to participate in STEM communication with high impact and visibility. Wikipedia is the 6th most visited website in the world, and contributions will improve the public's understanding of STEM disciplines. Through this assignment, students gain experience in writing about complex or technical topics in a way that a non-technical audience can understand.
- **Assignment 2 – Digital Outreach: Harnessing the Power and Connectivity of Social Media**
 - **Overview:** So far in the course, we've learned of the value and opportunities social media provides to scientists and engineers who are interested in outreach. In this assignment, you will experience it firsthand. You will create a Twitter account to tweet about your research and connect with others in the field.
- **Assignment 3 – The Case of the EpiPen: Company and Leadership in Crisis**
 - **Overview:** Mylan, the company that created EpiPen, faced a growing crisis in 2016 due to rapid price increases of the lifesaving injection used to treat anaphylaxis. You will be provided readings to better understand the context of the situation. Based off of the information provided, you will respond to several questions in an essay format.
- **Assignment 4 – Who Owns It? Grey Areas in Copyright and Artificial Intelligence**
 - **Overview:** Currently in the US, a copyright can be registered provided a human being creates the work. Given the rise of AI and machine learning, it is not difficult to imagine a future where computers have the ability to create songs, images, and books with little to no involvement from humans. Students are asked to weigh in on what degree of copyright—if any—should be granted to people or machines.

Group Project 15%: In Weeks 6 and 7, you will work in small groups to improve your online brand. Groups should be 3-4 students and meeting outside of class is expected. Details will be provided on Blackboard.

Final Project 30%: The final project is an analysis and culmination of what has been learned in the class. You are asked to analyze and compare USC's social media presence to another university. Details and spreadsheets will be provided at the end of the course.

Grading Breakdown

Assignment	% of Grade
Attendance	5
Discussion Board	10
Assignments (4)	40
Group Project	15
Final Project	30
TOTAL	100

Grading Scale

Course final grades will be determined using the following scale

A	95-100
A-	90-94
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

Assignment Submission Policy

Assignments should be submitted via Blackboard. If there are any issues with upload, please email (prior to deadline) to Mojarad@usc.edu.

Grading Timeline

Grading and feedback will be provided on a weekly basis via Blackboard.

Course Schedule: A Weekly Breakdown (subject to change)

	Topics/Daily Activities	Readings and Homework	Deliverable/ Due Dates
Week 1	Introduction and Course Overview Case study: Kim Kardashian and the FDA	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM
Week 2	History of Technology and Social Media	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 1 assigned
Week 3	How Social Media has Shifted the Scientific Conversation Case Study: Cold Fusion, Arsenic-based DNA, Lior Pachter and GTEch	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 1 due
Week 4	Introduction to Social Media Inreach and Outreach Case Studies: NASA	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 2 assigned
Week 5	Managing Social Outreach and Dealing with the Media Case Study: Kevin Folta	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM

	and Food Babe		Assignment 2 due
Week 6	Personal Branding for Scientists and Engineers	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Group Project
Week 7	Personal Branding for Scientists and Engineers	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Group Project
Week 8	Crisis Communication Case Study: Tim Hunt	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM
Week 9	Crisis Communication Case Study: Ebola	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 3 assigned
Week 10	Online Reputation	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 3 due
Week 11	Social Media and the Law Case Study: Monkey Selfie	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM
Week 12	Social Media and the Law Case Study: Fazlul Sarkar and Pubpeer	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 4 assigned
Week 13	How to Make an Effective Presentation; Collaborating with Colleagues: Digital vs. Face-to-Face	Discussion Board See Blackboard for assigned readings	Discussion Board: Initial post Thursday 2:00 PM; Follow up posts Sunday 11:59 PM Assignment 4 due
Week 14	Looking forward: AR/VR	Discussion Board	Final Project assigned
Week 15	Final Project		
Final	Final Examination		Course Evaluation Final Project due

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. <http://dsp.usc.edu>

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, <http://emergency.usc.edu>

USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime.

Provides overall safety to USC community. <http://dps.usc.edu>