

GEOG 415. Making Your Research Matter: Effective Design and Communication to Help Make an Impact on the World

As part of the General Education curriculum, this course will address the following Focus Capacities:

1. Communication Beyond Carolina

***Description:** Students build capacities for producing and listening to oral communication across a range of contexts. With multiple audiences, they learn to listen to and persuasively convey knowledge, ideas, and information.*

***How does this course fulfill this GenEd?** The entire focus of this course is on thinking, writing, and speaking clearly, and this course fulfilled the Communication Intensive (CI) general education requirement in the previous system. In this course, students will develop and practice methods to clarify and frame their research and learn basic design theories behind visual display of information. Over the course of the semester, students will experiment with a broad range of presentation styles for professional audiences while also expanding techniques and developing best practices for communicating with people outside of academia, including journalists, the public, and stakeholder groups. The course will cover the theoretical basis of effective communication and visualization, including how people learn and interpret information. The ultimate goal will be for students to be able to effectively engage with a variety of audiences to achieve their desired outcomes. Each week, students will give and receive feedback in order to improve their communication skills over the course of the semester.*

Questions for Students

1. How can I engage with audiences through oral communication?
2. How do I best convey knowledge, ideas, and information effectively to different audiences in situations?
3. How can I best understand the views and ideas of others, both individually and collectively?
4. What are the best ways of strategizing and delivering oral communication for achieving my intended outcomes?
5. How can media or digital compositions extend my ability to communicate?

Student Learning Outcomes

1. Ascertain the expectations, opportunities, and barriers to oral communication in distinct situations.
2. Tailor communications to different kinds of settings, including individual, small group, and public communication.
3. Tailor communications to different levels of expertise (inexpert, informed, expert), and to varying levels of alignment (resistant, ambivalent, supportive) and distinct contexts.
4. Make informed situation- and audience-sensitive strategic choices in content and delivery.
5. Improve ability to move audiences, as measure by best practices, audience feedback, and instructor feedback.

2. Recurring Capacities

***How does this course meet the recurring capacities requirements?** In this course, students must constantly think about evidence, argument, and uncertainty, particularly in terms of how they frame and communicate their evidence in a variety of settings. They must consider their research in a societal context, including topics surrounding research ethics and how to conduct research that will make a difference in the world. They must also think about human differences when they consider their*

audiences, different learning styles, and techniques to speak across a broad range of audiences. Students will write at least 10 pages over the semester through their weekly assignments, written responses to in-class activities, and written peer evaluation feedback. Students will be responsible for presenting material to the class throughout the semester; almost every week will include some sort of presentation activity. Although many of the presentations and the final project will be done individually, much of in-class time will be devoted to collaborative work, through peer feedback, reading discussion, and class activities.

Course Overview

Number	GEOG 415
Title	Making Your Research Matter: Effective Design and Communication to Help Make an Impact on the World
Credit hours	3
Course Description	This hands-on course will set you on a path towards being a scientist who will make a positive difference in the world through good research practices and effective communication. We'll start with reproducibility and ethics in science to make sure we have work we want to share! Then we'll work on scholarly communication: creating effective graphics, giving engaging oral and poster presentations, and writing abstracts that make people want to read further. Next, we'll concentrate on other audiences: social media use in research, communication with journalists, operating in the judicial and political arenas, and stakeholder outreach and public talks. Although this course is largely focused on the practical, each week we'll also cover theoretical issues, such as design theories, how people learn, and communicating in an age of anti-intellectualism.
Prerequisites	none
Target Audience	upper-level undergraduate and graduate students
Instructor	Dr. Erika Wise Office: 325 Carolina Hall Email: ekwise@email.unc.edu
Course Website	https://sakai.unc.edu/
Class Location, Days, Times	Carolina Hall 204, M 3:35PM - 6:35PM
Office Hours	Monday & Thursday, 2-3:30pm

Course Goals

In this course, students will:

- Think about what it means to be an ethical scientist.
- Develop and practice methods to clarify and frame their research.
- Learn basic design theories behind visual display of information and apply this to graphics and professional posters.
- Experiment with a broad range of presentation styles for professional audiences and identified the method(s) that best suit their own style and research subject.
- Expand techniques and develop best practices for communicating with people outside of academia, including journalists, the public, and stakeholder groups.
- Understand the basic theoretical basis of effective communication and visualization, including how people learn and interpret information.
- Become more effective communicators, improving their ability to show the importance of their research to specialists and non-specialists.

Course Materials

Required books:

Presentation Zen: Simple Ideas on Presentation Design and Delivery (2nd edition, 2011) by Garr Reynolds. ISBN-13: 978-0321811981

Don't Be Such a Scientist: Talking Substance in an Age of Style (2nd edition, 2018) by Randy Olson. ISBN-13: 978-1610919173

Eloquent Science: A Practical Guide to Becoming a Better Writer, Speaker and Scientist (2nd edition, 2009) by David M. Schultz. ISBN-13: 978-1878220912

In addition to these books, we will read journal articles and book chapters from a wide variety of sources that are available electronically through the UNC library. All other required readings will be posted or linked on our Sakai class site.

Course Requirements & Grading:

This class follows a workshop format emphasizing classroom discussion and student participation rather than lecture. Sets of readings around particular topics will provide the background for class discussions. The majority of class meetings will combine discussion of the readings with practical application of the week's material. Final course grade will be assessed based on the following course components:

- 25% Active class participation
- 40% Weekly assignments
- 10% Peer feedback
- 25% Final Project

Undergraduate grades will be assigned using the plus/minus A-B-C-D-F scale as follows:

93-100%: A 90-92.99%: A- 87-89.99%: B+ 83-86.99%: B 80-82.99%: B-
77-79.99%: C+ 73-76.99%: C 70-72.99%: C- 67-69.99%: D+ 60-66.99%: D 0-59.99%: F

Graduate student grades will be assigned using the H/P/L/F grading scale. Additional course requirements will be discussed in class.

Active class participation (25%): Active participation means coming to class prepared and making productive contributions to our discussion and in-class activities. This includes coming to class with a solid understanding of the readings, asking questions, and contributing to discussion concerning the assigned readings and any new materials presented in class. If you do not attend class, you cannot participate. Therefore, attendance is required and is included in this portion of the course grade (see policy on attendance).

Weekly assignments (40%): Most communication & visualization topics we cover will be associated with a weekly assignment that will involve the practical application of the material to the student's own research or area of research interest. These will include a combination of written and oral assignments that we will discuss and reflect upon further during our class meeting on the due date.

Peer feedback (10%): Most weeks you will be providing some form of feedback to your peers in the class concerning their weekly assignments, as well as their final projects. On a few occasions you will be asked to provide feedback outside of class as part of the weekly assignment. Feedback may take the form of oral discussion or informal or formal written feedback.

Final project (25%): The final project is an opportunity for you to apply ideas and readings from class to advance your own career development. The format can align with any of the areas covered in the class: it

might be a conference-length presentation re-done in “Presentation Zen” style, a poster or set of graphics for a paper, an organized outreach event, etc. It must be a new paper/poster/talk/outreach event (*i.e.*, students may not self-plagiarize earlier work – see UNC Honor Code). An individual meeting with me to outline your final project’s topic, format, & objectives is required no later than the sixth week of class.

Course Policies

Attendance and Make-up Work: Because this is a discussion-oriented workshop class, attendance is critical. The format of the class necessitates that everyone not only come to class, but come having thoroughly read and processed the materials assigned. Preparation of the week’s assignment is also critical and will be a key part of that week’s class; therefore, late assignments will not be accepted and credit for participation and presentations cannot be made up, except in rare instances covered by University policies. If you cannot attend class you must talk to me before the class meeting, or, in emergency situations, immediately following the absence (do *not* wait until the end of the semester). Students must provide documentation for excused absences, and dates of mandatory religious obligations and approved University activities must be provided *in advance* of the absence.

Classroom Behavior: Cell phones and other electronic devices are to be turned off at the beginning of class, as they can distract other students. Laptops are to be used for class-related activities only. Listen and consider others’ viewpoints carefully and respectfully. Violation of these basic courtesies or other actions that are disruptive to the class may result in removal from class.

Accommodations for Disabilities: A student seeking academic accommodations should first register with the Department of Accessibility Resources & Service and then contact me to make particular arrangements. See <http://accessibility.unc.edu/> for more information, policies, and procedures.

Honor Code: The University of North Carolina at Chapel Hill has had a student-administered honor system and judicial system for over 100 years. The system is the responsibility of students and is regulated and governed by them, but faculty share the responsibility. If you have questions about your responsibility under the honor code, please bring them to your instructor or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system. Your full participation and observance of the honor code is expected (<http://studentconduct.unc.edu/>).

GEOG415 SCHEDULE*

PART 1: Start with good scientific practices

Week	Date	Topics	Assignment Due
1		Introduction to the class: Your goals, your audiences	
2		Reproducibility The reproducibility "crisis" Workflow & best practices	Workflow design
3		Research Ethics Identifying tics in speech and writing Giving effective feedback	Written response to example situations
4		Self evaluation: Tried, true, and terrifying Identifying tics in speech and writing Giving effective feedback	Video presentation & peer feedback

PART 2: Communicating with academics

5		The narrative: Clarify & frame your message Key ideas Storyboarding	Revised video presentation
6		Creating effective graphics Using color: The end of the rainbow Design theories: Why you need Design C.R.A.P.	Bring graphics examples
7		Speaking to an audience 1: Designing your talk The cognitive style of PowerPoint Presentation Zen & the art of presentations	Redesigned graphic
8		Speaking to an audience 2: Delivering your talk Handling Q&A; types of talks Managing anxiety	Takahashi talk
9		Presentation Zen talks	Presentation Zen talks
10		Professional Posters Tying together key ideas and effective graphics Distilling to main message	Pachu Kichu talks
11		Writing scientific papers Mind maps and strategic repetition The publishing process	Virtual poster

PART 3: Communicating with the outside world

Week	Date	Topics	Assignment Due
12		Communicating through "new" media: dangers and opportunities Social media: Options and reach The pitfalls of having an opinion	Précis abstracts
13		In the news: Communicating with journalists Journalists are not out to get you How to stay true to yourself while staying on point	Written press release
14		Communicating with the outside 2: Stakeholders Recognizing jargon Iterative processes and the art of listening	ID stakeholders & short goal presentation
15		Communicating with the outside 3: The public Outreach in the post-factual world The benefits of engagement	Public talk - bring friends
16		Presentations of final products	Final projects/presentations

**This schedule is subject to change. The instructor reserves the right to make changes to the syllabus, including due dates, when unforeseen circumstances occur. Any changes will be announced in class, and an updated schedule will be provided on Sakai.*