

SCIENCE COMMUNICATION AND PUBLIC DISCOURSE

MINOR PROGRAM IN SCIENCE COMMUNICATION AND PUBLIC DISCOURSE

The ability to engage the public in discourse around science issues is of increasing importance. The global challenges of the COVID-19 pandemic and climate change highlight the importance of science communication to shape public policy, mold behavior, and spark public awareness of and interest in science. The courses in the Science Communication and Public Discourse (SCPD) minor introduce students to the theory and practice of rhetorical methodologies and behavioral science of communication. Students will learn to build their work on sound scientific evidence and knowledge, to adjust messaging to their intended audience, to use clear and compelling language free of jargon, and to employ effective storytelling techniques and vivid examples. They will also be instructed in how to match their approach to different communicational modes and media (written, video, graphic illustration, podcast, exhibit, performance, and so on). Courses emphasize rhetorical and communicational practice. Embedded within SCPD courses is the opportunity for students to couple their understanding of communication to their own individual scientific interests as they produce a final blog, video, graphic illustration, podcast, performance, or exhibit.

The minor is open to students from all majors.

PROGRAM REQUIREMENTS

The Science Communication and Public Discourse minor requires a total of seven courses (700 units).

Science Communication and Public Engagement

All students must take PARR 13700 Science Communication and Public Engagement, which will cover the rhetorical theory around communicating science to a variety of public audiences.

Additional Science Communication Courses

Students are also required to take two of the following courses:

SCPD 11100	Science Communication: Writing a Digital Science Story	100
SCPD 11200	Science Communication: Producing a Science Video Story	100
SCPD 11300	Science Communication: Crafting a Science Think Piece	100
SCPD 11400	Science Communication: Producing a Science Podcast	100
SCPD 11500	Science Communication: Designing a Science Exhibit	100

Scientific Skills Course

Students must take one Scientific Skills course from the Biological Sciences Collegiate Division (BSCD), Physical Sciences Collegiate Division (PSCD), or Psychology. To count as such, the course may not be used to fulfill a general education requirement. In addition, a Scientific Skills course must have a number in the BSCD, PSCD, or Psychology. General education courses (e.g., PHSC courses) that are not being used to fulfill general education requirements are permitted. Test credit (e.g., Advanced Placement credit) is not permitted.

If a student is majoring or minoring in one of these areas, the Scientific Skills course requirement will be waived, and the student will complete a six-course minor.

Electives

Finally, students must complete at least three electives. Note that any of the SCPD courses not used as a required course can serve as an elective. Other electives include:

CHDV 23100	Human Language and Interaction	100
PSYC 25700	The Psychology of Negotiation	100
TAPS 22500	Styles and Practice in Storytelling	100
TAPS 23600	Improv and Sketch	100
TAPS 25910	Short Form Digital Storytelling: Creating a Web Series	100
TAPS 28320	The Mind as Stage: Podcasting	100
TAPS 28330	Oral History & Podcasting	100

SUMMARY OF REQUIREMENTS

PARR 13700 Science Communication and Public Engagement	100
Two Additional Science Communication Courses	200
One Scientific Skills Course	100

Three Electives	300
Total Units	700

ADVISING AND GRADING

Courses in the minor may not be double-counted with the student's major(s), other minors, or general education requirements. Courses in the minor must be taken for quality grades. Only university-level courses offered by the University of Chicago may be approved to fulfill minor requirements; no other form of credit (including Advanced Placement) is allowed.

To declare the minor, students should contact the Program Director before the end of Spring Quarter of their third year. If the request is approved, the Program Director will submit a completed Consent to Complete a Minor Program (https://humanities-web.s3.us-east-2.amazonaws.com/college-prod/s3fs-public/documents/Consent_Minor_Program.pdf) form to the student's College adviser.

SCIENCE COMMUNICATION AND PUBLIC DISCOURSE COURSES

SCPD 11100. Science Communication: Writing a Digital Science Story. 100 Units.

Students will gain skills in written and digital communication, focusing on translating primary scientific research to a general audience. Students will learn what makes an engaging written article and how to write for the public without sacrificing scientific accuracy or complexity. We will explore platforms such as newspapers, magazines, blogs and social media. Students will work with faculty mentors to complete two written pieces that communicate research findings and their significance to a general audience. Student articles may be disseminated on the websites of the Illinois Science Council, Marine Biology Laboratory, the Institute for Translational Medicine, or the National Institutes of Health. Students will walk away with a polished, published work.

Instructor(s): S. Serritella; S. Kron Terms Offered: Autumn

Prerequisite(s): Three quarters of physical or biological (including neuroscience) sciences. Third- or fourth-year standing. This course does not satisfy the general education requirement in the physical sciences.

Equivalent Course(s): BIOS 28101, PHSC 28101

SCPD 11200. Science Communication: Producing a Science Video Story. 100 Units.

Students will gain skills in oral communication and will apply these skills to produce a TED Talk-style video communicating primary research in a scientific area of the student's choice. The goal is effective, engaging communication of science to a general audience without sacrificing scientific accuracy or complexity. Students will work with faculty to write scripts and design visual and audio elements. The talks will be filmed and edited in collaboration with UChicago Creative, who will assist with visual aids and animation. Students will leave the course with a professionally produced video that they can use to advance their career and promote their topic. While this course naturally follows BIOS 28101, that course is not a pre-requisite.

Instructor(s): S. Serritella Terms Offered: Spring

Prerequisite(s): Three quarters of a Biological Sciences Fundamentals sequence. Third- or fourth-year standing. This course does not satisfy the general education requirement in the physical sciences.

Equivalent Course(s): PHSC 28102, BIOS 28102

SCPD 11300. Science Communication: Crafting a Science Think Piece. 100 Units.

Science think pieces are an important genre of public writing. Think pieces are longform journalism typically ranging between 2,000 and 5,000 words that appear in print and online publications. Readers of all kinds turn to science think pieces to understand critical issues in STEM fields and get a big picture perspective. Science think pieces provide deep context, informed perspective, and expert synthesis of the most recent data and findings. They have the power to shape public opinion and influence science policy. This course guides students through the process of conceiving, developing, pitching, writing, and potentially publishing an engaging and persuasive science think piece. Through reading-inspired group discussions and instructor-led writing projects, the course introduces students to current theories and best practices of science communication as well as everyday processes in science journalism and public-facing science writing. Students will finish the course with a polished science think piece ready for submission to potential venues for publication. No prior knowledge of science communication is required.

Instructor(s): Jordan Bimm Terms Offered: Autumn Spring Winter

Prerequisite(s): Three quarters of physical or biological (including neuroscience) sciences. Third- or fourth-year standing or consent of instructor.

Equivalent Course(s): PHSC 28104

SCPD 11400. Science Communication: Producing a Science Podcast. 100 Units.

Podcasts are one of the most popular ways for non-experts to learn about science and for working scientists to follow happenings in other fields. Podcasts are audio productions typically ranging between 20 and 45 minutes. Science podcasts provide context, perspective, and synthesis to diverse audiences. They have the power to highlight recent findings, surface the everyday aspects of scientific research practices, amplify diverse voices in the sciences, and combat misinformation. This course prepares students to create science content in audio formats through practical studio experience. It provides a platform for science storytelling, an introduction to science communication theory, and covers science journalism best practices. Emphasis will be placed on crafting compelling audio stories, interviewing techniques, narration, sourcing audio clips and samples, editing,

accessibility, and creating show notes and supporting materials. Students will finish the course with a polished science podcast episode ready for publishing. No prior knowledge of science communication is required.
Instructor(s): Jordan Bimm Terms Offered: Spring Winter

SCPD 11500. Science Communication: Designing a Science Exhibit. 100 Units.

For more than a century, public science exhibits have popularized and increased access to scientific knowledge. Today, science exhibits are typically found at museums, planetariums, libraries, zoos, historical sites, universities, and online. Science exhibits allow the public to engage with material examples of scientific work and its products, learn from interpretive text and diagrams, and make connections between the history of science and science in the present day. They have the ability to foster public support for science, inspire future and early career scientists, and make science more accessible for audiences of all ages. This course prepares students to conceptualize, propose, design, install, curate, and evaluate science exhibits. The class will include visits to science collections and museums, interactions with professional curators, and will explore practical aspects of science communication theory. Students will finish the course ready to develop effective and informative science exhibits in both small and large formats, from a display case to an exhibit hall. No prior knowledge of science communication is required.

Instructor(s): Jordan Bimm Terms Offered: Winter

SCPD 11600. The Body on Display. 100 Units.

In this course we will examine the historical and ethical landscape of exhibiting humans in various forms to a viewing public. We will examine the display of living humans in circuses, medical grand rounds, and sports events through history. How the types of people displayed and the control for displays vary across different cultures and through time will be discussed. We will then turn our attention to corpses and discuss the timeline of an entity transitioning from a living being to a corpse and then to dirt. We will consider the treatment of bodies across this timeline, today and in the past. Regarding bodies used for medical purposes, we will look at anatomical displays in scientific journals, books, collections, and museums; the gross anatomy dissection of human corpses as a rite-of-passage in medical education; and artistic displays. Source material will come primarily from memoirs, academic articles, and books (mostly long-form journalism). Throughout, instructive comparisons such as between the display of apes and humans or between bodies and body parts, will be entertained as we consider the benefits and harms incurred by diverse parties from the display of bodies. Ultimately, our interrogation of bodies on display will reveal implicit societal attitudes toward life, death, and personhood.

Instructor(s): Peggy Mason Terms Offered: Winter

SCPD 11700. Science Communication: Explorations of Mars. 100 Units.

Mars seems to be on everyone's mind. Is there life there? Will humans ever set foot on the surface? Should we try to establish a settlement? How did we become obsessed with the Red Planet in the first place? This course will prepare you to communicate effectively about space science and join conversations about Mars happening across society. Through readings, activities, and discussions focused on history, science, and culture we will build an understanding of important figures, events, ideas, and trends required to communicate about Mars. A major focus will be learning how Mars has factored into different social and cultural movements here on Earth, including theological debates, military conquest, scientific exploration, and commercial settlement. We combine this foundation with theories and practices from science communication, including how to engage non-expert audiences, explain complex terms and concepts, convey uncertainty and ambiguity, and counter misinformation and conspiracy theories. The course moves from the earliest visual observations of Mars to present-day robotic missions on the planet's surface, and also considers plans for future human exploration and habitation. Students can expect a deepened understanding of our important cosmic neighbor and how to think, write, and speak about it. No prior knowledge of Mars is required.

Instructor(s): Jordan Bimm Terms Offered: Autumn

SCPD 13700. Science Communication and Public Engagement. 100 Units.

Communicating science and translating research to public audiences presents particular challenges. Based in rhetorical theory and analysis, this course prepares students to create and deliver oral, written, and digital communication to a public audience. Centering on theory and research identifying best practices, the course engages students in inquiry, interrogation, research, and testing of how to communicate complex and/or contentious scientific information to various audiences. Readings will include theory and analyses, including emerging research in effective public engagement of science. Written, oral, and digital assignments will provide students opportunities to practice, build, and hone capacities to translate research and engage the public with science.

Instructor(s): Ekaterina Lukianova Terms Offered: Spring

Note(s): Equivalent Course(s): PARR 13700

SCPD 25000. Science Communication: Science Writing for Scientists. 100 Units.

With misinformation about science more common than ever, it is critically important that the next generation of scientists learn how to communicate their work. Yet scientists are most often trained to explain their work to other scientists, not to the public at large. This class focuses on a breadth of different media that scientists can use to share the importance and complexity of work to a lay audience, from text, to imagery, to video and audio, focusing on how to construct simple and compelling stories from complex scientific ideas, and to convey accuracy without sacrificing clarity. Through in-class workshops and discussions, the students will learn how

to break down different aspects of good science writing, including story leads, quotes, and description, and practice interview skills with visiting scientists. Students will apply these skills through three writing projects of increasing length, ending with a final project telling a long science story through the medium of their choice. No prior knowledge of science communication is required. This course is part of the Semester in Environmental Science Program at the Marine Biological Laboratory
 Instructor(s): Claudia Geib Terms Offered: Autumn
 Prerequisite(s): This course requires enrollment in the Semester in Environmental Science Program at the Marine Biological Laboratory
 Note(s): Equivalent Course(s): TBD

SCPD 26021. Sense & Sensibility & Science @UChicago. 100 Units.

In Sense & Sensibility & Science, you will learn how to better incorporate into your thinking and decision making the problem-solving techniques of science at its best. Many insights and conceptual tools from scientific thinking are of great utility for solving problems in your own day-to-day life and in a democracy. Yet, as individuals, as groups, as whole societies we fail to take full advantage of these methods. The focus in this course is on the errors humans tend to make, and the approaches scientific methodology has developed (and continues to develop) to minimize those errors. The course includes a discussion of the nature of science, what makes science such an effective way of knowing, how both non-scientific thinking and scientific thinking can go awry, and how we can reason more clearly and successfully as individuals, as members of groups, and as citizens of a democracy. The undergraduate course will be simultaneously taught at UC Berkeley, Harvard and UChicago in spring 2024, with an opportunity for students from all three courses to participate remotely in the same deliberative polling capstone experience. UChicago's spring 2024 course premiere builds on a decade of experience developing and teaching the popular course at Berkeley and Harvard's adoption of its own version in 2021.
 Instructor(s): Reid Hastie, Jordan Kemp, Julia Koschinsky Terms Offered: Spring
 Prerequisite(s): PQ: Third or fourth-year standing.
 Equivalent Course(s): DIGS 26021, PBPL 26021, BPRO 26021, SOSC 26021, HIPS 26021

SCPD 26900. Communicating Science: For Peers and the Public. 100 Units.

This architectural studio course explores strategies for effectively communicating and presenting science to the public in a campus setting. Students will discover a compelling science story generated by UC scholars and present it as a multimedia exhibit proposal. Student groups also will collaborate on the development of a plan for a campus science exhibition space and science quad involving design charettes led by architects and landscapers. The class emphasizes verbal, visual, and spatial communication methods and incorporates scholarly writing, podcasts, websites, social media communication, design charettes, and 3D model-making. Students will hone their skills to effectively communicate breaking science in an engaging manner in a new campus setting.
 Instructor(s): Paul Sereno, Chana Haouzi, Jeremy Manier Terms Offered: Autumn
 Prerequisite(s): PQ: Third or fourth-year standing. This course does not require prior experience, and all are welcome. If you would like to join the class, please complete this consent form at arthistory.uchicago.edu/archconsent so we can learn more about you.
 Equivalent Course(s): ARTH 26809, ARCH 26900, BPRO 26900, CHST 26900, MADD 26900

