



The Art of Science Communication Course – Syllabus Summary

Week 1: Welcome to the Art of Science Communication

Pre-recorded video content:

- Course introduction

Learning objectives:

- Participants will begin to build a learning community among peers and facilitators.
- Facilitators will describe the format of the course and objectives.
- Participants will watch the course introduction video and complete a pre-course survey.

Week one assignment – “before” video presentations

Participants record a video of themselves giving a short (5 minute or less) talk on a scientific topic (preferably their research topic or a scientific topic of interest) to a non-expert audience.

Week 2: What is science communication?

Pre-recorded video content:

- Session 2.1: Introduction to science communication
- Session 2.2: Goals and benefits for science communication
- Session 2.3: Motivations for science communication

Learning objectives:

- Participants will be able to explain what science communication is and who does science communication.
- Participants will be able to describe different forms of science communication.
- Participants will compare goals and motivations for science communication.
- Participants will understand the role of science communication in increasing belonging and opportunity to engage in science.
- Participants will characterize the deficit model of communication.

Week 2 assignment:

Based on this week's content, participants reflect on how they define and envision their personal science communication to be by answering specific questions.

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Week 3: Knowing your audience

Pre-recorded video content:

- Session 3.1: Audience motivations
- Session 3.2: Who is your audience?
- Session 3.3: Perceptions of science and scientists

Learning objectives:

- Participants will identify different types of audiences.
- Participants will infer potential audience motivation.
- Participants will recognize varying perceptions of scientists and levels of trust in science.
- Participants will relate how cultural, educational, or social characteristics influences the audience, their perception of science, and their engagement with science.

Week 3 assignment:

Participants are given a recent index report of learned data as it pertains to public trust in science and scientists. They then reflect and respond to questions about how that data might or might not surprise them and how it is consistent (or not consistent) with what they see in social media and mass media.

Week 4: Connecting with your audience & building a presentation.

Pre-recorded video content:

- Session 4.1: Connect with your audience
- Session 4.2: Define your mission statement
- Session 4.3: Level the playing field
- Session 4.4: Scientific jargon

Learning objectives:

- Participants will articulate the goal of their talk through a mission statement.
- Participants will implement analogies and framing as a tool to make their message accessible to their audience.
- Participants will understand the importance of connecting with different audiences by creating common ground (i.e. leveling the playing field) when communicating.
- Participants will identify scientific jargon and choose alternative words or phrases to describe science topics.

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Week 4 assignment: Audience persona

A persona can be defined as a fictional character that you create to represent a specific person in your audience. It can help you understand what is important to that person, as well as their needs, behaviors, experiences, and motivations.

Images of fictional characters are provided & participants are asked to pick two of the individuals and imagine who they are. Consider their motivations, concerns, and needs and then develop a mission statement and a level the playing field statement specific to each of the imagined audience members.

Week 5: The power of stories

Pre-recorded video content:

- Session 5.1: Storytelling introduction
- Session 5.2: Title, core message, AND...
- Session 5.3: Principles of BUT and THEREFORE

Learning objectives:

- Participants will summarize and identify the elements of narrative storytelling.
- Participants will compose an engaging title, compelling opening statement, identify the specific problem and narrative hook, and determine the “so what?” (i.e. why it matters).
- Participants will practice the elements of building a scientific story.

Week 5 assignment: the ABT structure

Using what participants learn this week, they are asked to develop a scientific narrative using the AND, BUT, and THEREFORE method. Participants are asked to:

- Write a compelling title with a hook.
- Write down two opening sentences connected with an AND that connects two facts an audience needs to know.
- Write down one sentence starting with a BUT that states a problem and establishes tension or conflict.
- Write down one sentence starting with a THEREFORE that clearly point towards a journey to solve the problem your science aims to provide.

Week 6: Presenting your story

Pre-recorded video content:

- Session 6.1: Presenting with body language

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- Session 6.2: Presenting with tone and pace
- Session 6.3: Presenting with visual aids

Learning objectives:

- Participants will express the importance of body language, visual aids, and intonation.
- Participants will articulate the importance of understanding how gestures may be perceived across different cultural groups.
- Participants will identify cues of audience engagement during the presentation.
- Participants will devise complimentary visual aids and slide design for the audience and venue.

Week 6 assignment:

Participants create an outline of their presentation that ensures they address all of the major themes on the ASC Final Presentation Rubric.

Weeks 7: Final presentations & evaluations

Final video assignment:

Participants record or present a 5-minute (or less) final video presentation of the same scientific topic as the “before” video and evaluate their progress using a presentation rubric.

Participants determine who their audience members are and in what setting or venue they are presenting as they prepare and record their final video.

Prior to the final session, participants watch one another’s final video presentations and use the final presentation rubric to evaluate each other’s progress asynchronously.

Week 8: Final presentations continue *plus* course evaluation & key takeaways

Pre-recorded video content: Outro video of key takeaways