# PSY960: Communicating Psychological Science: A Practical Guide

Fall 2023

Time: Thursdays 3:00-5:00pm

Location: WJH B6

Instructor: Garth Coombs, PhD

Welcome to Communicating Psychological Science! I am excited to be your instructor and explore how to effectively communicate psychological science to a variety of audiences with you this semester. Throughout the year, you will undoubtedly have questions you would like to ask, topics you would like to further explore, concerns you would like to voice, feedback you would like to give, or even questions concerning a career in psychology. I am more than happy to meet with you about any of these things. No question or issue is too small. Remember, I am here to be a resource to you, so do not be shy about scheduling a meeting! Just make sure that you have checked the syllabus first before reaching out about course questions.

Contact Information: The best way to get in touch with me is via email (garthcoombs@fas.harvard.edu), which I check regularly (but less so after 8pm). I will do my best to respond within 24 hours and will often do so quicker depending on the nature of the email. However, if you send an email after 11pm ET on the day of an assignment due at 11:59pm, I will likely be asleep, and therefore will not see your email until the next day. To schedule a meeting, please send me an email with 3 potential times that you are available to meet and we'll figure something out.

**Fireside Chats (aka Office Hours):** I will also have weekly drop-in office hours Tuesdays 3-4pm in WJH 840.

What do I use office hours for? There is no right or wrong way to use office hours. Office hours are a chance for us to connect about the class/assignments, psychology more broadly, or just life in general. You may come with a formal question or topic that you want to discuss, or you can just come with a mug of hot cocoa to chat.

### **Course Overview**

As scientists, clearly communicating our research is critical. While we predominantly engage with psychological science through journal articles and formal presentations, the public largely engages with the same material through popular press articles, podcasts, or platforms like TED-Ed Talks. But how do we get from one to the other? And how do scientists get from their results to primary articles in the first place? In this course, we will explore these questions and develop strategies to describe, visualize, and write about psychological science. Students will develop critical skills in science communication and research translation by engaging in hands-on activities aimed at understanding and communicating science through different media to a variety of audiences. This course is ideal for students considering or conducting a thesis or other independent research project, students interested in graduate school, or students who want more experience distilling complex ideas to more digestible bits.

### **Course Objectives**

- 1. To improve the ability of students to understand primary scientific papers
- 2. To improve the ability of students to communicate science to scientists
- 3. To improve the ability of students to communicate science to non-scientists

# **Course at a Glance**

Assignment Key
Course Engagement
Communication Exercises
Poster Presentation
Multimedia Video Project

Week	Date	Topic	Assignments
1	9/7	Introductions	
2	9/14	Communication Basics	Participation Goal 9/11
3	9/21	Finding, Assessing, & Citing Research Articles	Infographic 9/18
4	9/28	Data Visualization	Article QALMRI 9/25
5	10/5	Science as a Story	Poster Draft 10/2
6	10/12	Workshop Projects	Multimedia Proposal 10/9 Elevator Pitch I 10/12
7	10/19	Poster Session	Final Poster for printing 10/16 Poster Presentation 10/19
8	10/26	Results & Figures	Participation Reflection I 10/23 Results & Figures 10/25
9	11/2	Presenting With Slides I	
10	11/9	Creating a Multimedia Video	Elevator Pitch II 11/9
11	11/16	Presenting With Slides II	Slide Presentation 11/15
12	11/23	No Class – Thanksgiving Break	Multimedia Script 11/27
13	11/30	Workshop Projects & Wrap Up	Multimedia Peer Review 11/29 Elevator Pitch III 11/30
14	12/7	No Class – Reading Week	Participation Reflection II 12/5
15	12/14	No Class – Finals	Multimedia Final TBD
16	12/20		

## **Assignments**

### Course Engagement (30%)

This is a small discussion-based tutorial designed to help you develop your skills as a psychological scientist. Therefore, it is of utmost importance that you remain fully engaged with your peers, the course material, and me. To reflect this important component of the course, 30% of your final grade will be based on three categories of course engagement:

- 1) One-on-one meetings with Garth (4%)
- 2) In class participation (18%)
- 3) Participation Goal & Reflections (8%)

### One-on-one Meetings (4%)

Free participation points for getting help with my assignments? Sign me up! While I am available to meet at any point of the semester, I would like to check in with you at least <u>3 times</u>. I promise I'm nice! These will be brief 15-20 minute check-ins to discuss progress and plans for upcoming assignments.

- Week after the first class (9/11-9/15): I want to get to know each of you individually, so I am asking everyone to schedule a 15-minute meeting with me the first week of class. I will send out a Google Calendar link the preceding week to facilitate this process.
- Midsemester check-in (10/23-10/27): I want to check in with everyone partway through the semester. We may discuss participation progress, plans for the multimedia project, and any other questions you may have.
- End of semester check-in (12/4-12/8): I want to check in with everyone towards the end of the semester to discuss the multimedia project and any other questions you may have.

### Participation (18%)

**Purpose:** Actively listening, articulating your thoughts, and participating in inquisitive discourse is an invaluable skill. Additionally, actively voicing your thoughts in class can help solidify your knowledge, allow your confusions to be clarified, and contributes to an atmosphere where grappling with ideas is normalized and collaborative learning can occur.

**Details:** If you want to receive full credit you will need to actively participate in class dialogue and presentations. Effective discussions involve both speaking and listening.

Thus, to actively participate you are encouraged to both 1) contribute to the conversation and 2) equitably share time by actively listening.

- Contributing: asking for clarification, sharing insights, voicing agreement or disagreement, raising questions of interest, responding to classmates' questions/discussion points, peer feedback, etc.
- Actively Listening: listening to what your classmates are saying, pausing and checking that you are allowing others time to join the dialogue, responding to classmates' questions, asking follow-up questions or expanding on a point someone else brought up, identifying common themes/ideas brought up in the discussion or synthesizing multiple points, speaking to say something rather than just to be heard, etc.
- Engagement: being attentive to your classmates, avoiding distractions and being a distraction (frequently leaving the room, talking to others, being on your phone or laptop), being encouraging of others speaking and acknowledging others (head nods, quiet affirmations, etc.), being enthusiastic about class activities, etc.

#### What if I do not feel comfortable speaking in class?

I understand that some people feel more or less comfortable speaking in front of others. Think of our classroom as an ideal space to practice this skill and develop confidence. If you feel anxious about speaking up in class, please come to my office hours or schedule a meeting and we can create a personalized plan for your course participation.

#### How will I know how well I am doing on my class participation?

At the beginning of the semester, I will ask you to set a personal participation goal. Midway through the course, I will ask you to complete a short reflection on your progress to your goal and revise it as necessary. I will also give you informal written feedback about your class contribution and engagement, including a "working grade" on a scale of 1 to 10. This allows you time to improve your score before the end of the semester. At the end of the semester, you will also complete a short reflection on your progress towards your participation goal.

Finally, there are several things you can do that will lead to a docked participation grade, such as not being engaged in class discussions or generally being disruptive (sleeping, looking at phone or being distracted on your laptop, frequently arriving late or leaving the classroom, etc.).

Please also see **Attendance Policy**.

### Participation Goal & Reflections (8%)

**Purpose:** Class participation can be somewhat ambiguous and highly individualized. To help make your class participation more concrete, you will set your own participation goal(s) for the semester and take time to reflect on the progress you are making.

**Details:** Your participation goal and reflections will consist of three related assignments:

- 1) **Personal Participation Goal** (2.6%) set a Specific, Measurable, Attainable, Relevant, Time-bound (SMART) goal for participating in class that challenges you to grow. Include an action plan for how you will measure your progress. You may want to keep notes on your own participation throughout the semester to help with the reflection papers. Your Participation Goal is due to Canvas by 11:59pm ET on Monday, September
  - 11<sup>th</sup>.
- 2) **Participation Reflection I** (2.6%) 2-3 page reflection paper summarizing your progress towards your goal and what you have learned about yourself and the way you participate in class from this exercise so far. Assign yourself a numerical participation grade out of 10 to help make your progress more concrete (note: the self-assigned grade is to help you measure your progress in the class and is not the grade you should expect, which will be assigned by me). Reset your SMART goal and action plan for the rest of the semester. Your Participation Reflection I is due to Canvas by 11:59pm ET on Monday, October 23rd.
- 3) **Participation Reflection II** (2.6%) 2-3 page reflection paper summarizing your progress towards your goal and what you have learned about yourself and the way you participate in class from this exercise. Reflect on what you would do the same and/or differently, and how you will participate in other classes moving forward. Assign yourself a numerical participation grade out of 10 to help make your progress more concrete (note: the self-assigned grade is to help you measure your progress in the class and is not the grade you should expect, which will be assigned by me).

Your Participation Reflection II is due to Canvas by 11:59pm ET on Tuesday. December 5<sup>th</sup>.

### Communication Projects (30%)

The best way to improve a skill is to practice it. A major part of this tutorial will be practicing the ways we communicate science to different audiences and through different media. To reflect this important component of the course, 30% of your final grade will be based on six communication projects:

- 1) Infographic (5%) due 9/18
- 2) Elevator Pitch I (5%) due 10/12
- 3) Results & Figures (5%) due 10/25
- 4) Elevator Pitch II (5%) due 11/9
- 5) Slide Presentation (5%) due 11/15
- 6) Elevator Pitch III (5%) due 11/30

### Infographic (5%)

**Purpose:** Condensing a scientific study into a digestible bit can be difficult and take practice. The goal of this assignment is to practice identifying a main thesis point (the take-away, or psychological lesson you want to teach) and concisely presenting it along with appropriate supporting evidence in a clear, engaging, and visual manner. You will also practice identifying an audience and tone for your messaging, and then presenting the science at an appropriate level.

**Details:** Based on one of the articles provided, create an infographic highlighting and supporting a psychological lesson (based in scientific findings) to a general audience. A good infographic is clear, memorable, and visually and textually concise. Data visualization is a key factor, so use charts, graphs, and icons where you can. Tell a story with your graphics and include a "hook," or primary take-away (thesis), that's easy to spot. You will work in pairs on this project.

#### Choose and read one of the following review articles:

- Finkel, E. J., Simpson, J. A., & Eastwick, P. W. (2017). The psychology of close relationships: Fourteen core principles. *Annual Review of Psychology*, *68*, 383-411.
- Levitin, D. J., Grahn, J. A., & London, J. (2018). The psychology of music: Rhythm and movement. *Annual Review of Psychology*.
- Falk, E., & Scholz, C. (2018). Persuasion, influence, and value: Perspectives from communication and social neuroscience. *Annual Review of Psychology*, 69(1), 329-356.
- Duckworth, A. L., Taxer, J. L., Eskreis-Winkler, L., Galla, B. M., & Gross, J. J. (2019). Self-control and academic achievement. *Annual Review of Psychology*, *70*(1), 373-399.

From this review article, identify a central lesson (or up to two related lessons) you would like to convey to an audience. Next, identify the key evidence that builds to and supports your central lesson (Why is this important? What facts lead to the conclusion?). Lastly, create a 1-page infographic clearly conveying this information in an engaging manner to your audience.

You will submit two components for this assignment:

- 1) **Infographic** a stand-alone infographic clearly conveying a main psychological lesson and supporting evidence in an engaging manner to your audience.
- 2) Reflection Paper 1-2 page reflection paper verbally summarizing your thesis and supporting evidence (e.g., if you were to write a figure legend explaining your infographic in professional language, what would it say?), and highlighting your thought process and what you learned during this exercise. Please also include a few sentences evaluating your and your peer's contribution to the project, how you two communicated with each other, and a piece of constructive feedback for how you and your partner could grow on future assignments (one point of feedback for each of you). Lastly, assign both yourself and your peer a numerical grade out of 10, which only I will see (note: the self-assigned grade is to help you measure your progress in the class and is not the grade you should expect, which will be assigned by me).

You will be graded on the following components:

- Thesis is the main take-away point clearly communicated and easily identifiable?
- Supporting Evidence is the main take-away point motivated and supported by relevant scientific evidence?
- Audience & Tone is it clear who your infographic is meant to be communicated to (e.g., children, parents, policy makers, the general public (adults), other scientists, etc.)?
- Communication is the scientific evidence clearly presented in an accessible and understandable manner (clear visualizations, concise bullet points or summaries)?
- Visual Appeal/Engagement (Style) is the infographic visually compelling, engaging, and professionally presented?
- Peer Evaluation how did you and your peer each contribute to the infographic?

The infographic (pdf, png) and reflection (pdf, doc) are due to Canvas by 11:59pm ET on Monday, September 18<sup>th</sup>, and can be submitted as separate documents.

### Results & Figures (5%)

**Purpose:** One of the main goals of a scientist is to communicate data and one's interpretation of the data to others through writing (e.g., the results & discussion sections of a journal article). The results section is also one of the most daunting parts of an article for students to read, interpret, and write after collecting their own data. Therefore, the goal of this week is threefold: 1) to practice better understanding results sections and figures of articles, 2) practice verbally communicating data to your peers in writing, and 3) practice visually communicating data to your peers.

**Details:** Please find two graphs from published articles representing psychological data. The first should be a figure that you think is strong: it clearly and accurately represents the data and supports the message the authors are trying to convey. The second should be a figure that you think is bad, misleading, or confusing for any reason.

Reflection: Write 1-2 paragraphs reflecting on your process of finding these figures, and what you believe are the strengths and weaknesses of each graph.

The Results & Figures assignment is due to Canvas by 11:59pm ET on Wednesday, October 25<sup>th</sup>.

### Slide Presentation (5%)

**Purpose:** Giving a scientific presentation is an important part of communicating science but can often be intimidating. During the semester, you will give one slide presentation The goal of this assignment is to get more comfortable presenting scientific research verbally and visually, practice presenting the science from your multimedia video in a clear and engaging manner, and practice tying together the results of multiple sources.

**Details:** Create a 5-6 minute slide presentation walking us through the main take-aways of two empirical articles you will be using for your Multimedia Presentation. It is important to tie the two articles together with a general introduction to the overall topic (what's the hook?), synthesis of the two articles (how to they relate and inform each other), and general conclusion(s) that synthesizes the two articles into a coherent lesson for your audience (what's the overall take-away from both?). Note, 5-6 minutes will go by faster than you expect, so you will need to focus on the key points that your audience needs to understand the general conclusion. This means you need to know the general conclusion synthesizing the two articles together and teaching your audience something about your topic, so you may want to start there and work backwards to help identify the key supporting information from each article to lead to your conclusion. You can selectively focus on one primary result for each article ("The authors found a number of interesting results, but for the purposes of this talk I'm going to focus on one") and may need to only briefly touch upon the key methodological details (do we need to know there were 100 participants recruited, but 3 dropped out and 4 were excluded due to errors in the data, leaving 47 females and 46 males ages 18-22 from a New England Ivy League university, or would "93 college students" suffice?). You will also need create slides to go with your talk that present your articles and conclusions in a clear and engaging manner. We will go over tips for good slides and presentations in class.

A rough guide to timing (general advice is to have no more than one slide per minute):

- 1-minute general introduction
- 1-minute article #1 take-away
- 1-minute article #2 take-away

1-minute synthesizing the two articles

1-minute general conclusion

You will be graded in two parts for this assignment:

- 1) Slide presentation (50%) were your slides clear, engaging, and accurate?
- 2) Verbal presentation (50%) was your in-class presentation conversational but professional, engaging, and contained all key points?

The Slide Presentation assignment is due to Canvas by 11:59pm ET on Wednesday, November 15<sup>th</sup> and will be presented in class on November 16<sup>th</sup>.

#### Elevator Pitches

**General Purpose:** An important part of communicating science is talking about it to others, but clear public speaking can be difficult and scary. Throughout the semester you will engage in three elevator pitches (brief presentations on a scientific topic). The goals of these assignments are to practice speaking about science with supportive peers, make sure you are clearly conveying your message, and become more comfortable with public speaking.

### Elevator Pitch I (5%)

**Purpose:** The goal of this elevator pitch is to practice public speaking and prepare for your poster presentation.

**Details:** Write up and practice (out loud) a 3-minute verbal summary of the empirical article you have chosen for your Poster Presentation. Your summary should introduce the main question the paper is addressing and why it is important, contain a quick walk-through of how they tested their hypothesis and what they found, and the main interpretation or take-away from the paper. While you want to hit all the key points of the article, you want to keep your audience with you. Therefore: 1) Don't try to squeeze too much information into the three minutes (identify the key features that you need to convey and relevant supporting evidence where needed); 2) Keep a conversational but professional and educational tone (beware jargon); and 3) Try to be off script so that you can engage with your audience (you can have notes). It is okay to not say everything exactly as you wrote it if you're still hitting all the key points and your audience is following and engaged.

You will be graded in two parts for this assignment:

- 3) Written submission (25%) is your summary concise, clearly written, and easy to follow, while still hitting all key points?
- 4) Verbal presentation (75%) was your in-class presentation conversational but professional, engaging, and contained all key points?

The Elevator Pitch I assignment will be presented in class on October 12th.

### Elevator Pitch II (5%)

**Purpose:** The goal of this elevator pitch is to practice public speaking about your multimedia video and start solidifying your ideas for the final project.

**Details:** Write up and practice (out loud) a 2-3-minute verbal advertisement for your final multimedia video. Your advertisement should introduce the main lesson of your video and motivating why it is important (what is the hook that will get your audience to tune in?). Remember: 1) Don't try to squeeze too much information into the 2-3 minutes (identify the key features that you need to convey and relevant supporting evidence where needed); 2) Keep a conversational but professional and educational tone (beware jargon); and 3) Try to be off script so that you can engage with your audience (try not to use notes, but you can if needed). It is okay to not say everything exactly as you wrote it if you're still hitting all the key points and your audience is following and engaged.

Salient features or characteristics of a good advertisement are: 1) it should be simple; 2) it should be capable of holding the audience's attention (what's the hook?); 3) it should educate your audience (what's your video about?); 4) it should be memorable; 5) it should be true and accurate.

You will be graded in two parts for this assignment:

- 1) Written submission (25%) is your advertisement concise, clearly written, and easy to follow, while still hitting all key points?
- 2) Verbal presentation (75%) was your in-class presentation conversational but professional, engaging, and contained all key points?

The Elevator Pitch II assignment will be presented in class on November 9<sup>th</sup>.

### Elevator Pitch III (5%)

**Purpose:** The goal of this elevator pitch is to practice public speaking about the science of your multimedia video in a concise and engaging manner.

**Details:** Write up and practice (out loud) the first 3-minutes of your final multimedia video. Your introduction should identify who you are and what audience you are targeting, introduce the main lesson of your video and why it is important, and begin discussing the supporting scientific evidence. As always: 1) Don't try to squeeze too much information into the three minutes (this is not the full video); 2) Keep a conversational but professional and educational tone (beware jargon); and 3) Please be

off script so that you can engage with your audience (no notes this time). It is okay to not say everything exactly as you wrote it if you're still hitting all the key points and your audience is following and engaged.

You will be graded in two parts for this assignment:

- 1) Written submission (25%) is your summary concise, clearly written, and easy to follow, while still hitting all key points?
- 2) Verbal presentation (75%) was your in-class presentation conversational but professional, engaging, and contained all key points?

The Elevator Pitch III assignment will be presented in class on November 30th.

### **Poster Creation & Presentation (15%)**

As we will focus on in this tutorial, the best way to improve a skill is to practice it. Scientists often communicate their science to others with academic posters at conferences. To demonstrate a deeper understanding of a specific topic in psychological research and communicate the science to a target audience, you will create and present an academic poster summarizing an empirical research article. This assignment will be broken into three sections:

- 1) Article QALMRI (5%)
- 2) Poster Draft (5%)
- 3) Poster Presentation (5%)

### Article QALMRI (5%)

**Purpose:** The first step of presenting a scientific article is thoroughly understanding it. The goal of this assignment is to help you get to know the article you will be presenting, identify the key elements of each section, and begin to think about what to present to others.

**Details:** Sign up for and read one of the provided empirical articles. Using the QALMRI framework, clearly and concisely summarize the key points of each section of the article (introduction, methods, results, discussion, conclusion).

- Bustamante, C.M.V., Coombs, G., Rahimi-Eichi, H., Mair, P., Onnela, J.-P., Baker, J.T., & Buckner, R.L. (2022) Fluctuations in behavior and affect in college students measured using deep phenotyping. *Scientific Reports*, *12*(1932).
- Morey, B.N., Gee, G.C., Muennig, P., & Hatzenbuehler, M.L. (2018). Community-level prejudice and mortality among immigrant groups. *Social Science & Medicine*, *199*, 56-66.
- Nook, E.C., Bustamante, C.M.V., Cho, H.Y., & Somerville, L.H. (2020). Use of linguistic distancing and cognitive reappraisal strategies during emotion regulation in children, adolescents, and young adults. *Emotion*, 20(4).

- Piccolo, M., Milos, G., Bluemel, S., Schumer, S., Muller-Pfeiffer, C., Fried, M., Ernst, M., & Martin-Soelch, C. (2019). Food vs. money? Effects of hunger on mood and behavioral reactivity to reward in anorexia nervosa. *Appetite*, *134*, 26-33.
- Rice, D. R., Hudson, S. K. T., & Noll, N. E. (2022). Gay = STIs? Exploring gay and lesbian sexual health stereotypes and their implications for prejudice and discrimination. *European Journal of Social Psychology*, *52*(2), 326-341.
- Rodman, A.M., Powers, K.E., & Somerville, L.H. (2017). Development of self-protective biases in response to social evaluative feedback. *Proceedings of the National Academy of Sciences*, 114(50). 13158-13163.
- Volberg, M.C., Gaesser, B., & Cikara, M. (2021). Activating episodic simulation increases affective empathy. *Cognition*, 209.
- Wang, S.B., Coppersmith, D.D.L., Kleiman, E.M., Bentley, K.H., Millner, A.J., Fortgang, R., Mair, P., Dempsey, W., Huffman, J.C., & Nock, M.K. (2021). A pilot study using frequent inpatient assessments of suicidal thinking to predict short-term post-discharge suicidal behavior. *JAMA Open Network, 4*(3). e210591-e210591

The Article QALMRI assignment is due to Canvas by 11:59pm ET on Monday, September 25<sup>th</sup>.

### Poster Draft (5%)

**Purpose:** The second step of presenting a scientific article as a poster is understanding the flow and identifying which components are best communicated via text and which are best as figures or graphics.

**Details:** Based on your QALMRI and our discussion of poster formatting, draft a scientific conference poster explaining your article to scientists (conversational and professional, avoid jargon).

Your poster should be a visual presentation of the research article and should be designed to convey only the most important information in words and charts/figures, and include the following sections:

- **Introduction**: includes a brief description of the theoretical background, articulates the research question the paper addresses, and specifies the hypothesis the research is designed to test. Consider how you might be able to incorporate a visual representation of the theory here.
- Method: outlines what took place in the experiment you are describing (e.g., participants, materials, procedure, etc.). Consider how you might be able to incorporate a visual representation of the experimental paradigm or other aspects of the methods here.
- **Results**: explains the key findings of the paper using the appropriate graphs and verbal descriptions. Be thoughtful about how you represent numbers!
- Discussion/conclusions articulates the results and interpretation in words, without using numbers. In addition, provide information about the following:

- Key limitations of the method and how they might relate to/bias/qualify the findings.
- One or more possible directions for future research. That is, given the results (and their limitations), how would you proceed in researching this topic? What are the potential applications of the findings?
- **References**: follows APA format (also for any citations in the other sections of the poster). The Purdue Online Writing Lab has an excellent resource: <a href="https://owl.purdue.edu/owl/research\_and\_citation/apa\_style/apa\_formatting\_and\_style\_guide/general\_format.html">https://owl.purdue.edu/owl/research\_and\_citation/apa\_style/apa\_format.html</a>.

Your visuals and graphics do not need to be finalized for the draft, but there should be an indication of where you will include visuals and a rough sketch of what they will look like. The more detailed the sketch, the more feedback you will get on your draft.

The Poster Draft assignment is due to Canvas by 11:59pm ET on Monday, October 2<sup>nd</sup>.

### Poster Presentation (5%)

**Purpose:** The last step of presenting a scientific article as a poster is the actual presentation, including verbally walking your audience through the poster and then engaging them in scientific discourse (answering their questions, asking for their feedback).

**Details:** You will print and present your poster to your peers and special guests during an in-class poster session.

The poster session will take place during class (Thursday, October 13). The purpose is practice presenting a scientific project verbally in a short time frame and an interactive format.

Here's the gist of an academic poster session:

- During a poster session, people walk around and engage each other in discussion about the posters.
- As a presenter, you should prepare a sound bite version of your project (30 seconds) that just conveys the research question (and why it matters) and the most important result, and a 3-minute version that walks the listener through the paper in more depth.
  - With the 3-minute version, you want to give the listener enough information so that they understand the paper and why it is interesting, without getting bogged down in the nitty-gritty details of the method, etc. people who are interested in those will ask more questions.
  - After the big-picture walk-through, listeners' questions will guide further explanation. (Note that this means you have to master all sections of the article, including the nitty-gritty of the methods in case they ask).
- As a listener, you should be attentive to the presenters and ask them questions.
   You will give constructive feedback on a subset of the projects.

Your Final Poster is due to Canvas by 11:59pm ET on Monday, October 16<sup>th</sup> and needs to be printed and brought to class for Presentations on October 19<sup>th</sup>. You may make small edits (formatting, typos, alignment, etc.) between submitting the final poster to Canvas and printing it for class.

### Multimedia Video (25%)

**Purpose:** A main goal of this course is to demonstrate a deeper understanding of psychological research and communicate these ideas and supporting empirical research to a target audience in a creative and engaging manner. The culmination of this course will be a multimedia video presenting empirical research on a topic of your choosing in a creative and engaging manner.

**Details:** Your goal is to help educate others a topic in psychology supported by recent empirical research. You will create a TED-Ed or ASAPScience style video (5-8 minutes in length) explaining this topic to a target audience. You must include at least 5 empirical articles from research related to the topic. You will be assessed in 4 parts:

### Proposal (5%)

For the proposal, you should identify:

- Topic: A specific topic in psychology research that you think is interesting and want to teach others about.
- Audience: A target audience to explain the research to. Your audience can be the general public, or more specific such as adolescents or elderly individuals, people with a psychiatric disorder, etc.
- Goal: A goal for explaining the research to that audience. It may be as simple as
  educating your audience about the topic in an accessible manner, or it may be
  more specific like convincing them to better their sleep quality by engaging in
  XYZ behaviors.
- Resources: Identify at least two primary research articles that you plan to use in your video (beyond assigned readings) and write a brief statement about how you plan to use that article in your video (e.g., what finding(s) will you focus on, and how will they fit in your broader story?).

The Proposal is due on Canvas by 11:59pm ET on Monday, October 9<sup>th</sup>.

### **Script** (5%)

Draft a written script and visual storyboard of your video for peer review. Introduce yourself and the video (you may want to get creative and give your video a backstory), introduce the topic and motivate why your audience should care, delve into the research, and conclude with summarizing the take-home points and an outro for your video. While some of the script may not be finalized and can be in bullet points/outline format, you will get better feedback from myself and your peers if your script is more fleshed out and complete. Please include a references section, as well as cite the source in your video verbally (e.g., "Tamika Jones and colleagues made the surprising discovery...").

The Script is due on Canvas by 11:59pm ET on Monday, November 27<sup>th</sup>. Since this will be peer reviewed in class, you cannot use your free-pass extensions on this assignment.

### Peer Review (5%)

You will be assigned 2 of your classmate's video scripts to peer review and provide constructive feedback. Act as an editor rather than a proofreader, meaning you should provide feedback on the piece as a whole rather than minor typos or style choices. First, summarize the author's argument or message agnostically (what do you think they are trying to convey?). Next, highlight which aspects of the script were particularly clear, engaging, or worked well. Last, indicate which aspects of the script were confusing or could be improved, potentially providing some direction as to how it could be improved. The Peer Review is due by 11:59pm on Wednesday, November 29<sup>th</sup> by 11:59pm ET. We will be going over the Peer Reviews in class, so you cannot use your free-pass extensions on this assignment.

### Multimedia Final Project (10%)

Record and edit together your video for your final project. You will be graded on both content and delivery (rubric will be provided in class along with details about video creation). Please include a references section, as well as cite the source in your video verbally (e.g., "Tamika Jones and colleagues made the surprising discovery..."). The Final Video will be due on Canvas during finals (TBD). We will hopefully gather as a group during our assigned finals session (TBD) to share our final projects and celebrate the semester together.

### **Course Policies**

### Engagement, Inclusion, and Civility

It is important that you come to class prepared, pay attention, and engage in discourse with your peers while in class. Making our lecture interactive and introducing multiple opportunities for peer interaction aims to make the class more fun and dynamic. However, it is paramount that we maintain an open, inclusive, and respectful environment while doing so. This means you are expected to engage with your peers in class in a manner that is considerate and respectful of their perspectives on the material. Additionally, in this class, we may talk about scientific questions that have implications for personal values systems and address sensitive aspects of the human experience, as well as put ourselves in vulnerable positions such as public speaking. Any personal experiences shared in class are considered confidential and should never be shared with anyone outside of class.

In my role as your instructor, I am committed to analyzing our topics with this in mind, creating an inclusive and safe space for all students and doing our part to diversify psychological science. If there is ever anything about our class that makes you feel unsafe or excluded, I hope you will feel comfortable letting me know.

Additionally, if you prefer to go by a certain name or wish to share with me your preferred pronouns, please reach out via email, office hours, or in-person.

### **Attendance**

Attendance is mandatory. This is a discussion-based course, the success of which depends upon you being here, and on time (i.e., no later than 12:45pm), for all sessions. Lateness and unexcused absences will result in a deduction from your participation grade for that week.

Unexcused absences or not informing me that you will miss class will result in a penalty of 2.0 times that week's participation grade. Oversleeping (when not assigned), avoiding class because you forgot to do the assignment, alien abduction, or time-travel experiments gone horribly wrong, are not valid excuses. I could be flexible in the case of alien abduction or time-travel but getting appropriate documentation may prove challenging.

Excused absences include medical and family emergencies. You should contact me that you will be missing class ASAP to arrange to make up the class material and earn participation points for that week. More than one excused absence may not be possible, but, if granted, will require making up missed work with an assignment of my choice or will result in a 0 as your participation grade for the missed class.

What if I need to miss class for Covid, a religious holiday, or another reason? If you know you will be missing class for an important and rigid scheduling conflict such as a religious holiday, please contact me at least 24 hours in advance (although the sooner the better) to notify me of the class you will be missing and the reasons for missing it. You will receive instructions for how you can make up the class material and earn your participation points for the missed class. If you do not make arrangements at least 24 hours in advance, you forfeit participation points for the missed class. The only cases in which 24 advance notice is not required is when absence is due to sickness or family emergencies. In these medical and family emergencies, please contact me ASAP to let me know and arrange to make up the class.

If you must miss class due to Covid, Covid isolation, or other illness, please contact me as soon as you are aware to let me know. If you are feeling healthy enough to virtually attend class, we will arrange for you to Zoom into the class to keep up with topics and participation (to some capacity). If you are feeling ill and cannot virtually attend, we will discuss a plan to make up the class material and earn participation points for the missed class, as well as a timeline to do so.

### "Free Pass" Extensions

You are allowed four (4) 24-hour extensions over the course of the semester that you may implement at your discretion (see Exceptions below). You may use your extensions:

- Each separately to extend four assignment deadlines 24 hours each, or
- Two simultaneously but on separate assignments to extend two assignment deadlines 48 hours each, or
- Two separately and two simultaneously to extend two assignment deadlines 24 hours each and one assignment deadline 48 hours

You may not use more than two 24-hour extensions on any one assignment (e.g., any one assignment can *only* be extended a total of 48 hours).

To extend a deadline, email me **before** the assignment's original deadline. You do not need to provide a reason (that's what I mean by "free pass"), and you may do so any time before the deadline (e.g., 11:58pm for a 11:59pm deadline is fine). No additional passes or extensions will be granted beyond these free passes, so use them thoughtfully. If you extend a group assignment, all group members must be willing to use one or two of their extensions.

#### **Exceptions:**

There are assignments for this course that will be actively used during class time. These assignments cannot be extended:

- Final Multimedia Video (the deadline for final projects is set by the University and cannot be extended except in emergencies)
- Multimedia Script & Peer Review (your peer will need time to read and review your script prior to class)
- Poster Presentation (in-class presentation)
- Slide Presentation (in-class presentation)
- Elevator Pitches (in-class presentations)

### Grading

The following letter grade schema will be applied to this course:

### Academic Integrity

### **Plagiarism**

Very few students start the semester with the intention of committing plagiarism. However, the pressure of success, the number of deadlines, and the hectic lifestyle of a Harvard student can be overwhelming and can lead to carelessness or worse. What may seem unthinkable now may well seem reasonable at 2:00am the morning before multiple deadlines. It isn't. The consequences for your academic career are dire.

#### What is Plagiarism?

- 1. Plagiarism (v.) is the act of taking undeserved or unwarranted credit for something.
- 2. *Plagiarism* (n.) is something represented in a plagiaristic fashion.

Severe plagiarism (a.k.a. "copying") is the most overt and deceptive form of plagiarism. This involves deliberately misrepresenting all or part of another person's work as one's own. For example, a student might turn in a paper written by another student in a previous term. Another common example is writing containing chunks of "copy-and-paste" from published articles or internet sources such as Wikipedia.

Irresponsible plagiarism (a.k.a. "omission") is the act of paraphrasing or quoting from a source, without giving credit to the source. The author does not necessarily explicitly take credit for the idea or materials (but this is nevertheless implied).

Self-plagiarism (a.k.a. "recycling") is the act of representing one's own previous ideas or materials as new and original. For example, a student might turn in all or part of the same paper for more than one course. This may not seem as bad as stealing another person's work, but it is deceptive, and therefore unacceptable.

### Should I Plagiarize?

No. You will be caught, and you will feel really badly. See the Academic Integrity section of the Student Handbook for the grisly

details: https://handbook.fas.harvard.edu/book/academic-integrity

### How Can I Avoid Plagiarizing?

Give credit where credit is due. Cite every source that influences your thinking or writing. Sometimes it is unclear whether a source is necessarily or directly responsible for your own thinking or writing. When in doubt, it is best to err on the side of caution. It is indescribably better to perhaps cite something unnecessarily than it is to plagiarize by failing to provide a necessary citation. Feel free to ask me for advice.

It is important to note that plagiarism also applies to other forms of communication, including your contributions to the in-class discussions. Plagiarism in spoken form is no less heinous and carries the same consequences. Keep in mind that plagiarism does not necessarily have to be intentional to be serious.

For the university's official description of plagiarism, see Harvard's Guide to Using Sources at https://usingsources.fas.harvard.edu/.

### The Harvard College Honor Code

You will be expected to abide by the Harvard College Honor Code (<a href="http://honor.fas.harvard.edu/honor-code">http://honor.fas.harvard.edu/honor-code</a>) at all times and for all assignments.

### **Collaboration**

Discussion and the exchange of ideas are essential to science, and you may find that discussing your ideas with your peers is helpful to thinking through and assignment or your paper topic. In that sense, collaboration is encouraged (and required for some assignments). However, you should ensure that any written work you submit for evaluation is the result of your own research, writing, and ideas (and your partner's where applicable). You must also adhere to standard citation practices in psychology and properly cite any books, articles, websites, lectures, etc. that have helped you with your work. Furthermore, if you received any help with your writing (feedback on drafts, etc.) you must acknowledge this assistance in a separate page at the front of your assignment. Finally, if someone makes a suggestion that proves essential to the assignment, you must acknowledge their contribution in a collaboration statement at the end of your assignment.

### Al Policy

This course is about you, the students, learning to better communicate psychological science with other humans. Therefore, you are strongly encouraged to generate all content yourself, without the aid of artificial intelligence programs such as ChatGPT, which may hinder your own independent thinking and creativity. If you do decide to use an Al program as part of one of your projects, you must:

- 1) Receive permission from the instructor prior to using AI programs. You may use AI programs on no more than 2 assignments turned in during the semester.
- 2) No more than 25% of any project turned in may be generated by AI programs. Any use of AI programs to generate work must be expanded upon by you and reframed into your words (please do not copy and paste directly from the AI). It is your responsibility to ensure that any findings or articles cited by AI are accurate and of high quality.
- 3) You may not submit any work generated by an AI program as your own. If you include material generated by an AI program, it should be cited like any other reference material. For example, if you use ChatGPT-3, you must cite "ChatGPT-

3. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI. https://chat.openai.com/" both in your references and within the text. If you have any questions about AI use for an assignment, it is your responsibility to be in touch with me prior to the assignment deadline.

### Accessibility & Accommodations

Harvard College is committed to providing an accessible academic community. The Disability Access Office (DAO; https://dao.fas.harvard.edu/) works with students who have disabilities to provide reasonable accommodations. To receive consideration for reasonable accommodations, you must contact DAO. Contact the DAO for more information at (617) 496-8707 or dao@fas.harvard.edu. Students must provide proper documentation within 2 weeks of the beginning of the semester to the instructor. Failure to do so may result in my ability to coordinate accommodations.

# Readings & Pre-class Work

Assigned chapters from the following books will be provided on the Canvas site, or you may purchase them for your own use:

Greene, A. E. (2013). Writing science in plain English. University of Chicago Press. Beins, A. M., & Beins, B. C. (2020). Effective writing in psychology: Papers, posters, and presentations. John Wiley & Sons.

### Week 1: Introductions (9/7)

Prep Work

- Read the Syllabus & familiarize yourself with the Course Site
- Pre-class Survey
- Dooley, P. (2017). Why we need to stop explaining science. *Biophysical Reviews*, *9*(2), 69-71.

#### Assignment due:

Participation Goal 9/11

### Week 2: Communication Basics (9/14)

Prep Work

- Read Green Chapters 1-2
- Marshall, M. (2012, October). *Talk nerdy to me* [Video]. TED Conferences https://www.ted.com/talks/melissa marshall talk nerdy to me
- Siegel, J. M. (2008). Do all animals sleep? Trends in Neurosciences, 31(4), 208-213.
- Explore Canva & join Canva classroom: <a href="https://www.canva.com/brand/join?token=8uq6h39EL\_mRHLQAgdfKTw&referrer">https://www.canva.com/brand/join?token=8uq6h39EL\_mRHLQAgdfKTw&referrer</a> =team-invite

#### Assignment due:

• Infographic 9/18

### Week 3: Finding, Assessing, & Citing Research Articles (9/21)

Prep Work

- Read Beins & Beins Chapter 3
- Bouchrika, I. (2023, May 12). What is empirical research? definition, types & samples. What is empirical research? https://research.com/research/what-is-empirical-research
- Ecker, U. K. (2017). Why rebuttals may not work: the psychology of misinformation. *Media Asia*, 44(2), 79-87.

 Chalabi, M. (2015, February). Three ways to spot a bad statistic [Video]. TED Conferences

https://www.ted.com/talks/mona\_chalabi\_3\_ways\_to\_spot\_a\_bad\_statistic

#### Assignment due:

Article QALMRI 9/25

#### Week 4: Data Visualization (9/28)

Prep Work

- Read Beins & Beins Chapter 16
- McCall, T. (2018, September). The simple genius of a good graphic [Video]. TED Conferences
   https://www.ted.com/talks/tommy\_mccall\_the\_simple\_genius\_of\_a\_good\_graphic.
- Smith, A. (2016, April). Why you should love statistics [Video]. TED Conferences https://www.ted.com/talks/alan\_smith\_why\_you\_should\_love\_statistics
- McCandless, D. (2010, August). The beauty of data visualization [Video]. TED Conferences https://www.ted.com/talks/david mccandless the beauty of data visualization
- The psychology behind data visualization. Treehouse Tech Group. (2021, May 20). Retrieved August 5, 2022, from <a href="https://treehousetechgroup.com/the-psychology-behind-data-visualization/">https://treehousetechgroup.com/the-psychology-behind-data-visualization/</a>
- Optional: Taei, P. (2017). Visual design principles: 5 things you should know to create persuasive content. YouTube. Visme. Retrieved August 5, 2022, from https://youtu.be/IKqqA4fCDzA

#### Assignment due:

Poster Draft 10/2

### Week 5: Science as a Story (10/5)

Prep Work

- Read Green Chapters 3-4
- Beins & Beins Chapter 17
- Patel, K. (2019, January). The benefits of using comedy to explain science
  [Video]. TED Conferences
   <a href="https://www.ted.com/talks/kasha\_patel\_the\_benefits\_of\_using\_comedy\_to\_explain\_science">https://www.ted.com/talks/kasha\_patel\_the\_benefits\_of\_using\_comedy\_to\_explain\_science</a>
- Smith, P. (2018, January). *Telling stories with data method 1 (the "how we got here" method)* [YouTube]. Innk Storytelling Agency https://youtu.be/g-rCSinAZf0
- Smith, P. (2018, January). Telling stories with data method 2 (the "discovery journey" method) [YouTube]. Innk Storytelling Agency <a href="https://youtu.be/g-rcSinAZf0">https://youtu.be/g-rcSinAZf0</a>

#### Assignment due:

Multimedia Proposal 10/9

### Week 6: Workshop Projects (10/12)

Prep Work

- Read Green Chapters 5-7
- Anderson, C. (2013, June). How to give a killer presentation: Lessons from TED. Harvard Business Review. Retrieved August 5, 2022, from <a href="https://hbr.org/2013/06/how-to-give-a-killer-presentation">https://hbr.org/2013/06/how-to-give-a-killer-presentation</a>
- Price, M. (2011, January). The perfect poster: Experts reveal the art behind displaying your science. American Psychological Association. Retrieved August 5, 2022, from <a href="https://www.apa.org/gradpsych/2011/01/poster">https://www.apa.org/gradpsych/2011/01/poster</a>

#### Assignment due:

• Elevator Pitch I 10/12

#### Week 7: Poster Session (10/19)

Prep Work

Print Poster: https://library.harvard.edu/services-tools/large-format-printing

#### Assignment due:

- Poster Presentation 10/19
- Participation Reflection I 10/23

### Week 8: Results & Figures (10/26)

Prep Work

- Read Beins & Beins Chapter 8
- Gaissmaier, W., Wegwarth, O., Skopec, D., Müller, A. S., Broschinski, S., & Politi, M. C. (2012). Numbers can be worth a thousand pictures: Individual differences in understanding graphical and numerical representations of healthrelated information. *Health Psychology*, 31(3), 286.
- Jhangiani, R. S., Chiang, I.-C. A., Cuttler, C., & Leighton, D. C. (2019, August 1).
   Expressing your results. Research Methods in Psychology. Retrieved August 5,
   2022, from https://kpu.pressbooks.pub/psychmethods4e/chapter/expressing-your-results/
- Elliott, K. (2019, October 22). 39 studies about human perception in 30 minutes. Medium. Retrieved August 5, 2022, from https://medium.com/@kennelliott/39-studies-about-human-perception-in-30-minutes-4728f9e31a73#.2hhwcvmtt
- Optional: Rosling, H. (2006). The best stats you've ever seen [Video]. TED Conferences

https://www.ted.com/talks/hans\_rosling\_the\_best\_stats\_you\_ve\_ever\_seen

- Optional: Ploger, M. (2019). Five data storytelling tips to improve your charts and graphs [YouTube]. Visme. Retrieved August 5, 2022, from https://youtu.be/4pymfPHQ6SA
- Optional: Wellington, B. (2015, April). Making data mean more through storytelling [YouTube]. TEDxBroadway. Retrieved August 5, 2022, from https://youtu.be/6xsvGYlxJok

#### Assignment due:

Results & Figures 10/25

### Week 9: Presenting with Slides I (11/2)

Prep Work

- Alley, M., & Neeley, K. A. (2005). Rethinking the design of presentation slides: A
  case for sentence headlines and visual evidence. *Technical*Communication, 52(4), 417-426.
- Knott, R. (2018, November 27). How to create a video storyboard. The TechSmith Blog. Retrieved August 5, 2022, from https://www.techsmith.com/blog/video-storyboard/

Assignment due:

### Week 10: Creating a Multimedia Video (11/9)

Prep Work

- Using multimedia & visuals. American Association for the Advancement of Science. (n.d.). Retrieved August 5, 2022, from <a href="https://www.aaas.org/resources/communication-toolkit/using-multimedia-visuals">https://www.aaas.org/resources/communication-toolkit/using-multimedia-visuals</a>
- Mainero, R. (2020, October). Cognitive theory of multimedia learning [YouTube]. https://youtu.be/pxTbZffhlhQ
- Mainero, R. (2020, October). 12 principles of multimedia learning: Part 1 [YouTube]. <a href="https://youtu.be/Uk3eNZaywqM">https://youtu.be/Uk3eNZaywqM</a>
- Mainero, R. (2020, October). 12 principles of multimedia learning: Part 2
  [YouTube]. <a href="https://youtu.be/Z3YeLri6J1U">https://youtu.be/Z3YeLri6J1U</a>
- Mainero, R. (2020, October). 12 principles of multimedia learning: Part 3
  [YouTube]. <a href="https://youtu.be/cGYDuANOPQ8">https://youtu.be/cGYDuANOPQ8</a>

#### Assignment due:

Elevator Pitch II 11/9

### Week 11: Presenting with Slides II (11/16)

Prep Work

 Fleming, N. (2018). How to give a great scientific talk. Nature, 564(7736), S84-S84.

- Anderson, C. (2016, April) TED's secret to great public speaking [Video]. TED
   Conferences
   https://www.ted.com/talks/chris\_anderson\_ted\_s\_secret\_to\_great\_public\_speaking
- Optional: Nancy Houfek (2020). The performing art of scientific presentation.

#### Assignment due:

Slide Presentation 11/15

# Week 12: No Class (Native American Heritage Day & Thanksgiving Break) (11/23)

Assignment due:

Multimedia Script 11/27

### Week 13: Final Wrap-Up & Workshop Projects (11/30)

Prep Work

 Orella, M., Smith, M., & Hosking, R. (n.d.). Peer Review – Best Practices. Broad Institute of MIT and Harvard. Retrieved August 5, 2022, from https://mitcommlab.mit.edu/broad/commkit/peer-review/

#### Assignment due:

- Multimedia Peer Review 11/29
- Elevator Pitch III 11/30

### Week 14: No Class (Reading Week) (12/7)

Assignment due:

Participation Reflection II 12/5

### Week 15: No Class (Finals Week) (12/14)

Assignment due:

Multimedia Final TBD

# **Additional Campus Resources**

#### **Counseling and Mental Health Services**

617-495-2042 (Mon-Fri 8AM-6PM ET)

617-495-5711 (evenings, nights and weekends)

Smith Campus Center, 75 Mt. Auburn St, 3W

https://camhs.huhs.harvard.edu/

Counseling and Mental Health Services offers consultations, short-term counseling, medical prescribers, outside referrals, virtual workshops, and urgent care. For advice outside of 8AM-6PM ET, please call the advice nurse at 617-495-5711. If you are in crisis, please call 911.

#### **Academic Resource Center**

academicresourcecenter@harvard.edu

1414 Massachusetts Avenue, floor 3R

https://academicresourcecenter.harvard.edu/college-students

The Academic Resource Center (ARC) provides many different resources to assist Harvard College and GSAS students succeed and thrive in and outside the classroom. They offer academic coaching and workshops as well as peer tutoring and an English language conversation program, as well as many other helpful services.

### **Harvard College Writing Center**

dcewriting@gmail.com

Barker Center basement

https://writingcenter.fas.harvard.edu/

The Harvard College Writing Center offers help with general writing as well as specific written assignments. You can meet individually with a tutor at any stage of the writing process (ideas, outlines, drafts, etc.) or review their writing resources online (including help with APA style).

#### Office of Career Services

617-495-2595 / ocsrecep@fas.harvard.edu

54 Dunster Street

https://ocs.fas.harvard.edu/

The Office of Career Services assists students with career exploration, advising, internship and job searching, and the medical, graduate, or professional school application process. Their services are meant to supplement the advising that you receive from your House Tutors and academic department by providing additional resources and guidance.

### **Additional Resources**

#### **Writing Resources**

There are resources offered within and outside the psychology department for student writing. Some of these resources include:

- 1. American Psychological Association. (2009). Publication manual of the American Psychological Association (7th ed.), Washington DC: American Psychological Association Press. (You may purchase this book online here).
  - a. In addition, the <u>Owl of Purdue APA Manual</u> is a very helpful electronic resource for this course.
- 2. Carson, S.H., Fama, J.M., Clancy, K., Ebert, J., & Tierney, A. (2012). Writing for psychology at Harvard: A guide for psychology concentrators. Cambridge: The President and Fellows of Harvard University.
- 3. <u>Harvard College Writing Center</u>: The writing center provides help with any aspect of writing and offers both appointment and drop-in assistance.
- 4. Writing resources compiled by our Writing Fellow: <a href="https://undergrad.psychology.fas.harvard.edu/writing-advising">https://undergrad.psychology.fas.harvard.edu/writing-advising</a>
- 5. Harvard Library's website dedicated to psychology.
- 6. The Expos program has a great website called the Harvard Guide to Using Sources, available online at: http://usingsources.fas.harvard.edu/icb/icb.do