

Psych 4986W: Perception and Action Capstone

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Time: 9:30-10:45

Location: Middlebush 11

Office Hours: By appointment

Teaching Assistant: TBD

Office Hours: 11-12pm Tuesdays or by appointment.

Location: McAlester 316

Primary Writing Center Tutor: TBD

Readings: Provided via Canvas

Course Description

In masonry, a “capstone” is the crowning piece that sits atop a completed construction. It is typically carved from harder material than the underlying stones, serves to draw them together into a stable structure and to shield them from the erosive effects of the weather. While tempted, I will not ask for your help in rebuilding my garage this semester. Instead our “capstone” will be one of the crowning pieces of your psychology program. It will draw together some of what you have learned during your time as an undergraduate science major. By virtue of its being a *writing intensive course*, there will be a major emphasis on sharpening your written communication skills. Regardless of where your post-collegiate adventures lead, the ability to communicate effectively and efficiently in writing will, like a capstone, serve to encompass your education.

Our focus is on *action*, a topic that until recently has been given little attention by mainstream psychology. By contrast, the study of action is central to the interdisciplinary field of Cognitive Neuroscience, my own area of expertise. Actions are goal-directed and undertaken by choice. That is, we decide which actions to pursue based on our perceptions, memories, motivations, personalities, emotional states, etc. *Action* is therefore a perfect focus for an integrative “capstone” course. As opposed to the more traditional topics that preoccupy cognitive psychologists (e.g., memory, language, attention etc.), actions are what natural selection operates on. The probability that an organism (including you) will reproduce does not depend directly on any of these isolated mental events. It depends instead on how the organism behaves, how it *acts* in the world. The study of action therefore serves to connect psychology to the rest of biological science.

Perception and action is an enormous topic. We will devote our limited time to what is currently known about how we use information from vision and our other senses to select and guide fundamental actions in the world (e.g., reaching, grasping and manipulating objects, gesturing

and using tools). This particular area of cognitive neuroscience has undergone a major revolution in the past thirty years, brought about by advances in our understanding of the human brain. My own research has played a role in this revolution, and I will endeavor to share the inside stories from these experiences, which have involved using the latest brain imaging and brain stimulation techniques, and also studying some fascinating patients whose brain injuries have revealed the inner workings of action mechanisms. When relevant, we will consider the implications of these findings for improving rehabilitation for those with brain, spinal cord, or bodily injuries.

Course Objectives

- Gain a broad understanding of the cognitive neuroscience of action and methods used to investigate human brain-behavior relationships
- Refine your ability to communicate ideas effectively and efficiently in writing
- Become comfortable writing non-fiction and fiction from a variety of different perspectives
- Provide and incorporate constructive feedback on your writing from your professor and from your peers

Course Requirements and Grading

For you to succeed in this course you must be: *motivated* to prepare for, attend and actively participate in class meetings, *driven* to engage in critical analyses of the material, and *committed* to improving your writing through revision.

Required Materials. You will need to come to class with a device (preferably laptop or tablet) on which you can write and submit your work electronically.

Late papers will not be accepted. All submitted drafts and final papers must be typed using Times New Roman, 11-point font and submitted via Canvas.

You will complete three types of graded assignments this term, worth a total possible of 100 points:

- *15 Weekly Reaction Papers: Up to 2 points per paper. Total possible = 30 points*
 - Each Tuesday you will write and submit a brief (100-150 word) reaction paper during class.
 - 1 point will be earned for submitting a reaction paper on time; and 1 additional point will be awarded based on quality.
- *6 Biweekly Essays: Up to 10 points per paper. Total possible = 50 points; for your 5 best efforts with the lowest grade dropped.*
 - These approximately 500-word (~1 single-spaced, typed page) papers will provide an opportunity to further develop your critical thinking and analytical skills and to refine your writing. They will also facilitate your developing a broad understanding of the field of perception and action research.
 - Drafts will not be graded. However, 2 points will be deducted from the final paper if a draft is not turned in on time.
 - Final versions will earn up to 10 points each.
 - Points from your 5 best efforts will be counted.
- *1 Final Paper: Total possible of 20 points*

- Your final assignment is to prepare a 2500-word (approx. 5 single-spaced, typed pages) paper that would be acceptable as a piece of high quality science journalism on a topic in perception and action. You should assume that your audience is scientifically literate and curious, but lacks detailed knowledge of the specific subject. The paper will include a minimum of five citations of original research from peer-reviewed sources. Citations will be formatted in the APA style. You will be provided with feedback and given the opportunity to iteratively revise this piece prior to receiving your final grade for the assignment.

Grading Summary: 100 possible points

- 15 Weekly Reaction Papers: 30 points total (up to 2 points per paper; 1 point for completion, 1 additional point awarded based on quality)
- 6 Biweekly Essays: 50 points total (up to 10 points per paper, based on your 5 best efforts with the lowest grade dropped)
- 1 Final Paper: up to 20 points total

Letter Grades

A = 94 -100; A- = 90 – 93; B+ = 87 – 89; B = 83 – 86; B- = 80 – 82; C+ = 77 – 79

C = 73 – 76; C- = 70 – 72; D+ = 67 – 69; D = 63 – 66; D- = 60 – 62; F = < 60

2-Week Class Cycle

Each **Tuesday** I will give a presentation on a topic in perception and action. You will be expected to come to class having completed any reading assignments and be prepared to engage in active discussion. Toward the end of each Tuesday meeting I will ask you to write a brief (100 - 150 word) reaction paper that focuses on that day's topic. These reaction papers will be submitted at the end of class.

Thursday meetings will be workshops devoted to writing and writing-related activities. Dr. Frey and graduate TA will be available to provide guidance and feedback on workshop days, and you are encouraged to also solicit feedback from your peers.

Every other Thursday, you will receive an assignment for a biweekly essay in class, and work on drafting a 500-word paper. These assignments will challenge you to apply and articulate what you are learning about perception and action. They will challenge you to adopt new perspectives on the material, and to explore different styles to communicate effectively to a range of audiences. As part of this process, we will often view talks that have been chosen to stimulate your thinking about specific topics in perception and action. Along with the readings and material covered in Tuesday lectures, these talks will be essential to the completing the writing assignments. As needed, we will take time on Thursdays to discuss particular issues related to improving your writing.

Below is a summary of the two-week class cycle. You must come to class with a device that can be used for writing and submitting your work over the wireless network. To summarize:

Tuesday Lecture and Discussion: In-class reaction pieces due at the end of class.

Thursday Writing Workshop: Receive biweekly essay assignment and draft papers.

Saturday: Drafts submitted via Canvas by 5:00 PM. 2 points deducted from final grade if not completed on time.

Tuesday Lecture and Discussion: In-class reaction pieces due at the end of class.

Thursday Writing Workshop: Receive feedback on drafts of biweekly essays and undertake revisions.

Saturday: Final papers submitted via Canvas by 5:00 PM.

Academic Policies and Support

A complete list of academic policies can be found under the Support & Policies link to the left. These apply to this and all courses.

My lectures are protected by state common law, and federal copyright law. Lectures may **NOT** be recorded on video or cell phones. You may **NOT** take pictures during class. That is, you may not take pictures of the lecture slides, your classmates, your TA, and/or your professor during class.

Writing Center

The Writing Center, located in the Student Success Center, offers writing support to all students at the University of Missouri. Tutors come from all majors and are familiar with a variety of writing styles and formats. Although tutors are not editors, they can help with any writing project at any stage of the writing process, from initial brainstorming, to major structural revisions, to putting the finishing touches on a final draft. To make an appointment, submit your work to the Online Writery, or learn what else the Writing Center has to offer, visit their website: <https://writingcenter.missouri.edu> You can make appointments with any of the center staff.