

PSYCHOLOGY GRADUATION WITH DISTINCTION THESIS WORKSHOP

Spring 2018

Wednesday 1:40-4:10 PM

Social Sciences 124

Instructor:

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Course Description:

Conducting and interpreting research in psychology can be fun, challenging, and very rewarding. This course is meant to provide you with the deeper understanding of the process of conducting psychological research that can only come from taking the responsibility to complete your own project successfully.

In this course you will be introduced to all aspects of formulating, pitching, conducting, and communicating a Psychology research project, including:

- Crafting and “pitching” a research question
- Optimally presenting your project in oral form, poster form, and as a written research paper
- Learning to write a research-based grant/scholarship proposal

Additionally, by the end of this course, you will be able to describe the process of publishing an article, including peer review, and important current issues, including ethical dilemmas, in psychology and neuroscience research.

Learning Objectives:

As psychology students who wish to graduate with distinction in your major, this workshop is meant to help you:

1. to successfully complete and communicate your honors project;
2. to critically think about, and give feedback on, important questions in psychology and neuroscience, and the research and publication process; and

3. to prepare you for graduate-level study in psychology or neuroscience, and provide you with a comprehensive perspective on inquiry in the behavioral sciences that might be applicable to any career path you choose.

Course Requirements:

- Class attendance, readings and written exercises when assigned, and participation in discussion
- Preparing and giving a PowerPoint-based oral presentation of your thesis
- Preparing a scientific poster of your research and presenting it at the annual Visible Thinking fair
- Preparing a written proposal for a follow-up research project
- This is a “no laptop” class, unless you are specifically told to use one

Expectations:

You are all enrolled in this course because you intend to graduate from Duke with a distinction in Psychology. This course will provide you with guidelines, feedback, and resources that will help you complete an honors thesis that will meet the expectations of the department and that will be the culmination of your undergraduate academic career. It will also provide you with instruction and resources on how you would formulate a research-based grant or fellowship application, for example, in graduate school studies. We hope that you will strive to produce a publication-worthy project that will further your research career and be a source of great pride. We expect that you will make the most out of the resources and suggestions provided in this workshop, and we expect for you to take initiative to work independently and consistently on your project throughout the year.

Ways in which you will learn in this class:*Writing and communicating your thesis project*

You will read papers written by expert scientists on the most effective structure for research articles. You will apply what you have read about Introduction, Methods, Results, and Discussion sections by writing drafts of these sections for your own thesis project. You will have the opportunity to incorporate the instructor feedback that you receive on these sections, as well as the peer feedback that you receive on your thesis title, elevator pitch, and opening gambit to improve both the ultimate product that you hand into your adviser and your science communication skills, which will generalize beyond Duke. You will also think more critically about how to expand your thesis project into a fellowship application typical for first-year graduate students by elaborating on the significance and applicability of your findings to the real world. Finally, towards the end of the course, you will practice defending your thesis in both a poster fair and orally during scheduled class time.

Discussing current issues in psychology and neuroscience

Through discussion, lecture, and engagement with your written and oral assignments, you will discover how to flourish in graduate school and what the process of publishing research articles is like. You will think critically about current issues in psychology neuroscience, such as open science, peer review, and other ethical dilemmas, by writing about and discussing selected readings with instructors and classmates. Ultimately, we hope that these assignments will encourage deeper processing of the material, whether to promote the sustained development of your communication skills or provide you with a comprehensive perspective on inquiry in the behavioral sciences that is applicable to any career path you choose.

Grading:

This is a graded course (A, B, etc.). On the one hand, successful completion of (i.e., not failing) this course is an obligatory component of your honors thesis. If you do not perform satisfactorily, you will fail this class and will not be able to obtain a Graduation with Distinction. On the other hand, the grading of this course is independent from your thesis work, in that we are not evaluating your GwD thesis project in this class. Rather, the course grading will be based on a number of written and presentation assignments that are related to your thesis, but could also apply to any other research project. ***All written assignments that are due for a particular date must be submitted on Sakai by midnight the day before (unless noted otherwise).*** There is no final exam or single “big paper”. The following is the grading breakdown (for more information, see the detailed syllabus below):

- Graded assignment 1:** 5% of grade (research question/elevator pitch)
- Graded assignment 2:** 5% of grade (anticipated challenges in thesis writing)
- Graded assignment 3:** 10% of grade (opening paragraphs assignment)
- Graded assignment 4:** 5% of grade (title assignment)
- Graded assignment 5:** 5% of grade (thoughts on peer review)
- Graded assignment 6:** 10% of grade (introduction draft)
- Graded assignment 7:** 5% of grade (“open science” assignment)
- Graded assignment 8:** 5% of grade (ethical dilemma assignment)
- Graded assignment 9:** 10% of grade (methods section draft)
- Graded assignment 10:** 5% of grade (“broader impacts” assignment)
- Graded assignment 11:** 10% of grade (results section draft)
- Graded assignment 12:** 10% of grade (discussion section assignment)
- Graded assignment 13:** 10% of grade (oral practice presentation)
- Graded assignment 14:** 5% of grade (poster presentation assignment)

To receive full marks on an assignment, whether oral or written or during presentations or discussions of the material, students should

- 1) ensure that they follow instructions and that their material shows a sufficient state of completeness:
 - formatting and length are appropriate to what has been instructed;

- students should demonstrate that they have read the chapters assigned for a particular week by appropriately integrating the content from their readings *or* demonstrate that they have a good grasp of the material for their thesis by defining and emphasizing key constructs in their research, and citing and summarizing the findings of appropriate sources and their own results.
- 2) turn in an assignment on time; and
 - 3) use clear, appropriate, and purposeful punctuation, grammar, and diction.

All assignments are graded out of 10 points. If any of the above points are not satisfied, you will receive a two point deduction. Per day late (24 hours) from when the assignment was due, you will also receive a two point deduction. If you don't hand in your assignment, you will receive 0 points.

IMPORTANT DATES/DEADLINES:

April 18 – Last day to defend and turn in 2 copies of thesis *if nominated for Zener Award*.

April 19 – Visible Thinking poster session

April 25 – Deadline for all students *not* applying for Zener Award to defend thesis

April 30 – Final bound copy of thesis due to the DGS Office

Remember that you need to turn in your paper to your committee **one week before** your defense!

Missed class or work:

If you are unable to attend class or meet an assignment deadline due to a short-term illness or injury, please contact the instructor as soon as possible but no later than 48 hours to discuss your missed work. You should seek support from your academic dean if you are experiencing long-term illnesses or personal emergencies. See <http://trinity.duke.edu/undergraduate/academicpolicies/illness> for details.

Changes to the syllabus:

The instructor may make minor changes to the syllabus, such as eliminating or changing a reading assignment, or adjusting a deadline. Such changes will be made in consultation with the class to ensure that sufficient notice is given and that changes are fair and favorable.

Academic accommodations:

Students who have a disability, which may necessitate an academic accommodation or the use of auxiliary aids and services in a class, must initiate the request with the

Student Disability Access Office (SDAO). The SDAO will evaluate the request with required documentation, recommend appropriate accommodations, and prepare a verification letter dated in the current academic term in which the request is being made. Please contact the SDAO as soon as possible; a week's notice is needed to arrange for appropriate accommodations (sdao@duke.edu). If accommodations are needed, please make sure your instructor is notified.

Academic integrity:

Students are expected to adhere to Duke's Community Standard and are responsible for understanding the University rules regarding academic integrity. In brief, conduct prohibited includes all forms of academic dishonesty, among them copying from another's exam, unpermitted collaboration, representing another's work as one's own, or helping or allowing someone else to do any of these things. Keep in mind that the *minimum* penalty for academic dishonesty is receiving zero credit on the exam or assignment in question.

Readings:

General Reference Texts (available at Duke Libraries):

American Psychological Association (2009). *Publication Manual of the American Psychological Association* (6th. Ed .) APA: Washington, DC .

Sternberg, R.J. (2000). *Guide to publishing in psychology journals*. Cambridge University Press: New York

Downloadable text:

Ethical Principles of Psychologists and Code of Conduct

<http://www.apa.org/ethics/code2002.pdf>

<http://www.psychologicalscience.org/observer/the-science-of-scientific-writing#.WGxVf7Yrj-U>

Available on Sakai:

"The Graduation with Distinction Basics" resource guide (the GwD Handbook)

Many additional selected readings will be given to you during the term and posted on Sakai under the Reading Materials folder.

Class Schedule:

DATE	TOPIC/ASSIGNMENTS
01/17	<u>Assignment for this class:</u> read the GwD Handbook prior to this class

	<p>Topic 1: Introductions, syllabus review, class expectations, etc. (Also: introducing the Duke Reader Project)</p> <p>Topic 2: Graduate School – how to get in and flourish (We discuss components of grad school applications and issues you face when getting there)</p> <p><u>Assignments for following class:</u></p> <p>1- Graded assignment 1 (5%): Read Evans (2007) chapter, plus my slides (“Crafting a research question.ppt”) and write a succinct draft (max. 8 sentences!) of your research question/project (What? Why? How?), which you will submit to Sakai and present orally as an “elevator pitch” (max 90 sec. – no reading!!) in the next class.</p> <p>2- Graded Assignment 2 (5%): Read the Bem chapter and Kording & Mensh paper on writing an empirical research paper. Think about your own project and write down one specific challenge that you see (and why) with trying to implement their advice in writing your thesis paper. Submit this short note (3-4 sentences) to Sakai.</p>
01/24	<p>Topic 1: Elevator pitch of your research question (Students present, critique, and refine elevator pitches in class)</p> <p>Topic 2: The anatomy of a research article and writing an Introduction section (Overview of writing a good article, with particular emphasis on crafting an optimal introduction)</p> <p><u>Assignments for following class:</u></p> <p>1- Graded assignment 3 (10%): Consult my lecture slides and read the Kendall et al. chapter, and employ two of the discussed strategies to write <i>two versions</i> of an opening paragraph for your thesis introduction (2-4 sentences each). Additionally, provide a commentary/justification as to which one you prefer, and why (2-3 sentences).</p> <p>2- Graded assignment 4 (5%): Read the Sternberg book chapter on crafting a title and abstract, and come up with 3 potential titles for your paper. Submit these titles to Sakai. You will present your opening gambit and title in the next class.</p>
01/31	<p>Topic 1: “Drawing them in” – your article’s title and opening paragraph (Students present possible titles and opening gambits for their introductions)</p>

	<p>Topic 2: How to write Methods, Results, and Discussion sections (Overview of important considerations for writing a great research paper)</p> <p><u>Assignments for following class</u></p> <p>Read the following articles on peer review:</p> <ul style="list-style-type: none"> - Walsh et al. 2000.pdf - http://www.psychologicalscience.org/observer/twelve-tips-for-reviewers#.WGxYZbYrJ-U - https://www.washingtonpost.com/news/morning-mix/wp/2015/03/27/fabricated-peer-reviews-prompt-scientific-journal-to-retract-43-papers-systematic-scheme-may-affect-other-journals/?postshare=3741427469958229&utm_term=.c4caa4cbc907 - http://www.sciencemag.org/news/2015/08/pubpeer-s-secret-out-founder-controversial-website-reveals-himself <p>Graded assignment 5 (5%): For the next class, submit a short document to Sakai in which you note what you consider the two most important advantages and disadvantages of blind as compared to open peer review.</p> <p>Graded assignment 6 (10%): Re-read the Kendall book chapter and consult my lecture slides to write a <i>full introduction draft</i> for your thesis paper following the structure we discussed in class (5-8 pages, double-spaced). For each section or paragraph, write a comment (1-2 sentences) that details the purpose or core message of that paragraph. Submission deadline on Sakai is 02/14.</p>
<p>02/07</p>	<p>Part 1: Peer Review Discussion (We discuss the pros and cons of blind and open peer review)</p> <p>Part 2: Publishing a research article (We discuss the different stages, and associated pitfalls, of getting your research published)</p> <p><u>Assignments for following class:</u></p> <p>1- Read the following articles on the “replication crisis” and on open science projects (<u>the first two are obligatory</u>):</p> <ul style="list-style-type: none"> - Simmons et al. 2011.pdf - Spellman 2015.pdf - https://digest.bps.org.uk/2016/09/16/ten-famous-psychology-findings-that-its-been-difficult-to-replicate/

	<ul style="list-style-type: none"> - Open Science Collaboration 2015.pdf - Gilbert et al. 2016.pdf <p>2- Graded assignment 7 (5%): For the next class, submit a short document to Sakai in which you note all of the ways in which your own project deviates from the “open science”/replication-promoting approach to research, as described in Simmons et al. Table 2 (but you can go beyond those points and refer to others you saw in those reading materials).</p> <p>3- Continue working on your full Introduction section draft.</p>
<p>02/14</p>	<p><i>Remember: Today is the deadline for submitting your full Introduction section draft!</i></p> <p>Part 1: Replicability/Open Science Discussion</p> <p>Part 2: Applying for fellowships or grants: Format and review criteria for NSF fellowships</p> <p><u>Assignment for following class</u></p> <p>Graded assignment 8 (5%): Describe an ethical dilemma in conducting research that you either have encountered, or could imagine encountering in your work, and how it may be overcome or prevented (5 sentences or so).</p> <p>Graded assignment 9 (10%): Read the Reis book chapter on writing a Methods section and consult my lecture slides to write a <i>full Methods draft</i> for your thesis paper. Submission deadline on Sakai is 02/28.</p>
<p>02/21</p>	<p>Part 1: Ethical Dilemmas in Research Discussion Students are faced with ethical dilemmas in research and come up with solutions</p> <p>Part 2: Applying for fellowships or grants: An exercise in “pitching” your research Students develop brief “intellectual merits” statements of their research</p> <p><u>Assignment for following class</u></p> <p>Graded assignment 10 (5%): Write a brief (max 6 sentences) “broader impacts” statement for your research project, including a commentary on why you focus on the particular angle you choose to focus on.</p> <p>Make sure to continue working on your full Methods section draft.</p>

<p>02/28</p>	<p><i>Remember: Today is the deadline for submitting your full Methods section draft!</i></p> <p>Broader Impact statement refinement (Students present, discuss, and edit broader impact statements in class)</p> <p><u>Assignment for following class</u></p> <p>1- Graded assignment 11 (10%): Read the Salovey chapter on crafting a Results section and consult my lecture slides to write a <i>full Results draft</i> for your thesis paper. Submission deadline on Sakai is 03/07.</p> <p>2- Think about what date(s) would suit you for your practice presentation. We will run a lottery for picking slots in the next class.</p>
<p>03/07</p>	<p><i>Remember: Today is the deadline for submitting your full Results section draft!</i></p> <p>Part 1: Crafting a poster for a conference presentation (Lecture on “dos” and “don’ts” of poster design, plus we will critique some posters from previous years)</p> <p>Part 2: Scheduling of, and tips on, your practice presentation (Lecture, plus we run a little lottery for picking practice presentation dates, and then go over some basic rules and tips for the presentation)</p> <p><u>Assignment for 03/21</u></p> <p>Graded assignment 12 (10%): Read the Calfee chapter on writing a Discussion section and consult my lecture slides to write a <i>full Discussion draft</i> for your thesis paper. For each section or paragraph, write a comment (1-2 sentences) that details the purpose or core message of that paragraph. Submission deadline on Sakai is 03/21.</p> <p>Graded assignment 13 (10%): After spring break, you will be practicing your oral presentation of your thesis.</p>
	<p><i>Spring Break</i></p>
<p>03/21</p>	<p><i>Remember: Today is the deadline for submitting your full Discussion section draft!</i></p> <p>Topic: Student presentations</p>

	<ul style="list-style-type: none"> • • • • • <p><u>Assignment for following class</u></p> <p>None, unless you are presenting next week.</p>
03/28	<p>Topic: Student presentations</p> <ul style="list-style-type: none"> • • • • • <p><u>Assignment for following class</u></p> <p>Graded assignment 14 (5%): Create a poster based on your research project in powerpoint format and submit to Sakai by 04/04. You will get feedback by 04/11.</p> <p>If you're presenting next week, prepare for that.</p>
04/04	<p>Topic: Student presentations</p> <ul style="list-style-type: none"> • • • • • <p><u>Assignment for following class</u></p> <p>None, unless you are presenting next week.</p>
04/11	<p>Topic: Student presentations</p> <ul style="list-style-type: none"> • • • • • <p><u>Assignment for following class</u></p>

	<p>Remember to get your poster printed before the Visible Thinking fair!</p> <p>If you're presenting next week, prepare for that.</p>
04/18	<p>Topic: Student presentations</p> <ul style="list-style-type: none"> • • • • • <p><u>Assignment for following class</u></p> <p>None, but be prepared for the Poster session tomorrow.</p> <p>Also: today is the Zener Award thesis submission deadline!</p>
04/19	<p>Visible Thinking Poster Session, 11:00am-2:00pm, Penn Pavilion</p>
04/25	<p>Topic: Reflection on what we've learned in this class</p> <p>Also: today is the last day to defend your thesis!</p>
04/30	<p>Final day to submit bound copy of thesis and final PDF to the Undergraduate Studies Office.</p>