

**Graduation with Distinction  
in Psychology  
Psychology & Neuroscience  
Duke University  
2021-2022**

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## **Graduation with Distinction Basics**

## **Important Note about the 2021-2022 Academic Year**

Greetings, potential Psychology GwD students! We are excited for the start of the school year, and the research questions that you will be exploring! Given the continuing uncertainty around public health issues, as well as the speed at which circumstances may change, please recognize that the deadlines and policies in this document are necessarily tentative. If circumstances require us to change any information provided here, please trust that the changes will prioritize your needs and well-being. In other words, any changes that we make should make things more manageable, not more difficult. Also, we will attempt to publicize any such changes as soon as they are made.

Have a good start to the fall term, and please reach out to [PsychologyDUS@duke.edu](mailto:PsychologyDUS@duke.edu) with any questions!

Bridgette Hard, PhD, Director of Undergraduate Studies

Angie Vieth, PhD, Associate Director of Undergraduate Studies

Natalia Silva Harwood, MEd, Undergraduate Program Coordinator/Career Specialist

## **General Information**

### **What is Graduation with Distinction (GwD)?**

The Graduation with Distinction (GwD) Program in Psychology is intended for students interested in completing a significant research project in Psychology during their undergraduate career. This project is more than a Research Independent Study; in fact, it's like a mini-dissertation. You will complete a research project, write a thesis, and defend it in front of a committee in order to graduate with distinction.

### **Why Pursue GwD?**

Conducting independent academic research under the guidance of a faculty mentor is a way to forge a close working relationship with one or more professors in your field, and this experience is invaluable. The mentor's familiarity with your work and your potential can also be enormously helpful if you apply to post-graduate programs of study. Distinction is thus not only an honor that is noted on your transcript, but represents a high point in your academic career and may facilitate subsequent scholarly pursuits. Distinction in Psychology also provides you with an opportunity to gain experience writing an empirical paper about your own research.

If you are considering graduate school in psychology, obtaining the experience that GwD provides will make you a stronger applicant. It also will help you see firsthand whether the research process is something you enjoy, which is important to learn before entering graduate school. GwD provides a mini-experience of graduate student life, as you get to see what it's like to form a committee and present your independent research to them.

If you are not interested in graduate school in psychology, doing GwD will still demonstrate that you went above and beyond traditional academic requirements. This, coupled with the firsthand research experience you receive, may make you a more compelling applicant for other graduate and professional programs, as well as jobs.

### **Who is Eligible to Enroll in GwD?**

The opportunity to write a thesis and qualify for GwD is open to those majoring in Psychology. Students at Duke can also pursue GwD outside the major. Information on this can be found at <http://trinity.duke.edu/undergraduate/academic-policies/gwd>.

### **Summary of GwD Requirements**

- **Overall GPA of 3.0 and major GPA of 3.5.** Applicants must expect to have an overall GPA of at least 3.0 and a Psychology GPA of at least 3.5 at the end of the fall term of their senior year. GPAs are not rounded up. Grades in independent study courses in Psychology (whether research or non-research directed) and the Distinction Thesis Workshop are not included in the calculations for the major GPA. In cases where the student's *final* GPA (end of spring term of senior year) falls just below the required cut-off, his or her faculty mentor may petition the Director of Undergraduate Studies for Psychology to permit the student to graduate with distinction.
- **IRB approval for the project.** Students are required to obtain IRB approval for their projects before enrolling in the Distinction Thesis Workshop, or PSY 496 (see below). Any exceptions to this policy require the approval of the Undergraduate Psychology Office. Please note that obtaining IRB approval may require significant time and effort. Students are encouraged to learn what is involved very early in the process by visiting <https://campusirb.duke.edu/> and/or speaking with one of the IRB staff members listed on the [Important Contacts](#) page of this handbook.
- **Completion of two semesters of Research Independent Study (RIS) related to the project.** Research Independent Study courses are full-credit, graded courses. Most students complete both required RIS courses during the senior year, but this is not true for everyone.
- **Completion of PSY 496, the Distinction Thesis Workshop.** This full-credit, graded course must be taken during the spring semester of the senior year (or junior year, for students planning to graduate in December). It is designed in part to help students complete the thesis write-up and prepare for the oral exam, as well as

to provide professional development in several key areas (e.g., the peer-review process involved in the publication of scholarly research, best practices for writing research grant proposals).

- **Completion of written thesis as well as oral exam/defense before a three-person faculty committee.** Written thesis components are outlined in the handbook section [Elements of Graduation with Distinction](#). A rubric for the evaluation of the final thesis and the oral exam may be found in the [Appendices](#) of this handbook.
- **Poster presentation at the Visible Thinking undergraduate research fair in April.**

## How to Enroll in GwD

- **Application**
  - Complete and submit the Qualtrics application form for Research Independent Study **at least one week before the end of Drop/Add**. Each term, the link to this application form will be provided on the Psychology & Neuroscience website. For Procedures and Policies around Research Independent Study in Psychology, please refer to the [Appendices](#) in this handbook.
  - Complete and submit the Qualtrics application form for GwD, which will require you to identify all three members of your thesis committee, prior to the last day of regular registration for the term in which the thesis will be defended (for a fall defense, Fall registration in March/April; for a spring defense, Spring registration in October/November). Each term, the relevant link to this application form will be provided on the Psychology & Neuroscience website. For Procedures and Policies around Graduation with Distinction in Psychology, please refer to the [Appendices](#) in this handbook.
  - When you complete the forms above you will receive the permission numbers needed to enroll in the Research Independent Study course and the Distinction Thesis Workshop.
  - If you plan to graduate in December, you will enroll in the Distinction Thesis Workshop during the spring semester of your junior year. If you plan to graduate in May, you will enroll during the spring semester of your senior year.
  - Although students typically complete GwD requirements during the two semesters of their senior year, some students begin their research earlier. Also, students who wish to complete their thesis as juniors may do so; this is unusual, but perfectly allowable.
- **Forming Your Committee**
  - Obtain a committee chair for your research. Then select two other individuals to serve on the thesis committee. Your committee chair can help you select the other two committee members.
  - The committee chair generally holds a primary or joint graduate training faculty appointment in P&N. (Other P&N faculty may be able to serve as chairs with special approval from the DUS, or with another faculty member serving as the ‘chair of record.’) The second committee member may hold a primary, joint, or secondary appointment in P&N. The final committee member may be a P&N faculty member, a post-doc or graduate student in P&N, a faculty member from another department at Duke, or a faculty member from another institution. (A current list of faculty with primary, joint, and secondary appointments may be found under the ‘People’ tab at <https://psychandneuro.duke.edu/>.)
  - The composition of your three-person committee must be determined **before** you submit your GwD application.

## Undergraduate Research with Human and Animal Subjects

The use of animals and human subjects in research is governed by Duke University in strict compliance with federal regulations. Before you begin research with human or animal subjects, you must have written approval from the Institutional Review Board (IRB). If your faculty mentor has not already received IRB approval for the study you will be working on, the staff at the Campus IRB will be happy to meet with you to talk about your protocol. You should feel free to call if you are not sure how to fill out the required forms, or if you have any questions about what you need to submit to the IRB. It will be easier to write your protocol if you have reviewed the materials available on the Campus IRB website: <https://campusirb.duke.edu/>

Prepare a draft of your protocol and consent forms and share them with your faculty mentor, who will help you fine-tune them. Both you and your mentor will need to be certified to conduct research with human subjects at Duke before your proposal can be approved. The following link provides information on certification: <https://campusirb.duke.edu/irb-policies/required-training>

- **Use of animals in research.** Upon submitting a proposal for a project that uses animals, you should prepare a protocol for the Duke Institutional Animal Care and Use Committee (IACUC): <https://sites.duke.edu/oawa/using-animals-at-duke-university/>

### **Beyond GwD**

An honors thesis demonstrates your commitment to psychology and your motivation to expand your research knowledge and skills. Completing this independent work will also speak of your ability to design a study, to collect and analyze data, and to interpret results. After the thesis is completed, you may have the opportunity to present at a conference or professional meeting, or the chance to publish your work in a peer-reviewed journal. In fact, this should be the ultimate goal of your thesis.

- **Present your work at conferences.** Whether conferences are in-person or virtual, professional presentations typically involve a 15-minute oral presentation for an audience, followed by discussion. These presentations are often part of a symposium, or group of papers, with other researchers whose work revolves around a similar theme. Conference presentations can also involve the creation of a poster, which may be more typical for undergraduate work.

Experience with presenting research is beneficial when applying to graduate programs, professional programs, or full-time employment. It serves as evidence of a thorough and accomplished undergraduate career. You should discuss with a faculty mentor the possibility of presenting your work at a conference. Your mentor will be able to provide you with different options and assist you with submission materials and deadlines.

- **Publish your work in a peer-reviewed journal.** Discuss with your mentor the possibility of publishing your work. He or she may assist you by identifying different journals that may be interested in your article. Journals such as the [\*Psi Chi Journal of Psychological Research\*](#) provide opportunities for students to present or publish, but you should consider the types of journals in which your mentor typically publishes.

The primary purpose of peer review is to ensure that the papers that are published are valid and unbiased, and to enhance the quality of the work. In the peer-review process, a paper is evaluated by several reviewers at the journal to which you submit. Reviewers are considered experts in the area addressed by your article. The reviewers critique the paper and submit their thoughts to the journal's editor, who then decides whether to publish the paper based on the reviewers' comments. The editor will either a) publish the paper without revisions (rare); b) ask you to revise and resubmit, which would likely lead to publication, or c) reject the paper. It's important to adopt a thick skin during the review process, and to understand that feedback can be useful and can help you improve your manuscript when you either re-submit to the original journal or choose a new journal for submission. Your mentor can help guide you through this process.

Past GwD students have successfully published their work in peer-reviewed journals. Doing so is a great way to strengthen your application to graduate school in psychology. Publishing as an undergraduate would be viewed positively by any graduate program or job to which you apply.

## **Sample Timeline\***

Timelines for senior theses are individual and relate specifically to your own research goals and the guidelines that you and your mentor set together. It is recommended that you share the Sample Timeline with your mentor and discuss what timeline will work for you. The Sample Timeline below provides guidelines for planning.

**Note:** Specific dates are for the **2021-2022 academic year**.

<b>Date</b>	<b>Suggested Status</b>
September	Refine research question, establish mentor expectations and timeline, begin data collection
October – December	Continue with data collection and start writing the introduction and method sections
Late January	Complete data collection
Early February	Begin analyses
February - March	Begin writing results and discussion and refine the introduction and method sections using feedback received in the PSY 496 class; give practice oral presentation in PSY 496
Early April	Finish draft that includes all sections, allow time for revisions after feedback from mentor
April 13	Deadline to defend thesis for students who have been nominated for the Zener award
April 20	Last day to defend thesis (last day of classes)
April 27	PDF of final document due to the Undergraduate Psychology Office

## **Important Deadlines for 2021-2022**

<b>Event</b>	<b>Deadline</b>
Submit GwD application form	Last day of regular spring registration (November 8, 2021)
Submit Research Independent Study proposal form	One week before the end of Drop/Add (January 12, 2022)
Enroll in PSY 494 and 496	Last day of Drop/Add (January 19, 2022)
Sign-up for Visible Thinking poster session	April 2022 (date TBD)
Final deadline for Departmental printing of research poster for Visible Thinking	April 2022 (date TBD – usually one week before Visible Thinking)
Visible Thinking poster session	April 2022 (date TBD – usually during the last week of classes)
Deadline for thesis defense for nominees for the Zener Award	April 13, 2021
Final deadline for thesis defense	April 20, 2021
PDF of final thesis to the Undergraduate Psychology Office	April 27, 2021

\*The deadlines above are subject to change, but any changes would be intended to help students (and would always be communicated promptly). Please refer to Important Note about the 2021-2022 Academic Year.



## Important Contacts

Person	Contact Information
<b>Bridgette Hard</b> Director of Undergraduate Studies	249 Reuben-Cooke <a href="mailto:bridgette.hard@duke.edu">bridgette.hard@duke.edu</a>
<b>Angie Vieth</b> Associate Director of Undergraduate Studies	243 Reuben-Cooke (919) 684-9678 <a href="mailto:azvieth@duke.edu">azvieth@duke.edu</a>
<b>Natalia Silva Harwood</b> Undergraduate Program Coordinator/ Career Specialist	235 Reuben-Cooke (919) 660-5719 <a href="mailto:natalia.silvaharwood@duke.edu">natalia.silvaharwood@duke.edu</a>
<b>Makeba Wilbourn</b> Professor, PSY 496	214 Reuben-Cooke <a href="mailto:makeba.wilbourn@duke.edu">makeba.wilbourn@duke.edu</a>
<b>Campus Institutional Review Board (IRB)</b> <a href="https://campusirb.duke.edu/">https://campusirb.duke.edu/</a> Holly Williams, Director Alejandro Martinez, Associate Director	Suite 710 Erwin Square 2200 W. Main Street, Durham, NC 27705 (919) 681-8686 <a href="mailto:holly.williams.irb@duke.edu">holly.williams.irb@duke.edu</a> (919) 684-4905 <a href="mailto:alejandro.martinez@duke.edu">alejandro.martinez@duke.edu</a>
<b>Undergraduate Research Support Office (Visible Thinking office)</b> <a href="https://undergraduateresearch.duke.edu/">https://undergraduateresearch.duke.edu/</a> Sarah Russell, Director McCall Calloway, Program Coordinator	011 Allen Building Phone: (919) 684-9259 <a href="mailto:ursoffice@duke.edu">ursoffice@duke.edu</a>  <a href="mailto:PN-undergrad-grants@duke.edu">PN-undergrad-grants@duke.edu</a>
<b>P&amp;N Staff Assistant (TBD)</b> Contact for P&N Undergraduate Grants (URS Matching Grant, Small Grant, Conference Attendance Grants)	

## **Additional Resources**

### **Funding Resources**

#### **Undergraduate Research Support Office Independent Study Grants**

URS Grants are intended to help defray research expenses of up to \$400 for Trinity and Pratt students enrolled in faculty-supervised independent study courses or the equivalent, such as thesis and research capstone courses. These funds are available to purchase approved supplies and equipment (which become the property of the University) for the research project, as well as to cover payment for research subjects. When strongly recommended by a student's faculty research mentor, the URS Program will consider supporting student travel to collect data or access a unique resource collection. Grants may not be used to buy personal books or other items, to cover living expenses, or to pay others who may be assisting with the research.

A limited number of Independent Study Grants are available each term. Preference is given to first-time applicants and to those who apply early.

Fall 2021 Deadline: Rolling from August 23 until all funds have been awarded

Spring 2022 Deadline: Rolling from January 6 until all funds have been awarded

Summer 2022 Deadline: TBD

**Purpose:** To defray project expenses for students in faculty-supervised independent study, thesis, or capstone courses.

**Funding:** Up to \$400

Application information may be found at

<http://undergraduateresearch.duke.edu/urs-programs/urs-independent-study-grants>

**Contact:**

011 Allen Building

Email: [ursoffice@duke.edu](mailto:ursoffice@duke.edu)

Phone: (919) 684-9259

#### **P&N Undergraduate Matching Grants**

Thanks to generous support from the Charles Lafitte Foundation, students in Psychology and Neuroscience who have been awarded an Independent Study Grant from the URS Office during a given term are eligible to apply for matching funds from P&N during the same term. These funds may be used for the same types of purchases as URS grants. Students may work on site, and if desired collect data in person from human subjects, as long as their mentors attest that their labs are following all of the guidance on the Campus IRB webpage for COVID-19 updates: <https://campusirb.duke.edu/covid-19-updates>.

Calls for application are issued each term, as well as during the summer, and awards are made on a rolling basis. Calls are distributed via the listserv for Psychology majors and minors and linked to this webpage: <https://psychandneuro.duke.edu/gift>. All else being equal, preference is given to majors (vs. minors or other students), individuals who have not yet received a matching or small grant (more on small grants below), and those who have submitted their applications early.

**Contact:**

Email: [PN-undergrad-grants@duke.edu](mailto:PN-undergrad-grants@duke.edu)

### **P&N Undergraduate Small Grants**

The Charles Lafitte Foundation has made it possible for P&N to offer Undergraduate Small Grants to students in Psychology and Neuroscience who were ineligible for, or who, for some other reason, did not receive an Independent Study Grant from the URS Office. Any such student who is conducting faculty-mentored research may apply for up to \$400 in funds. These funds may be used for the same types of purchases as URS grants and matching grants (e.g., study supplies and equipment, subject compensation). Students may work on site, and if desired collect data in person from human subjects, as long as their mentors attest that their labs are following all of the guidance on the Campus IRB webpage for COVID-19 updates: <https://campusirb.duke.edu/covid-19-updates>.

Calls for application are issued each term, as well as during the summer, and awards are made on a rolling basis. Again, calls are distributed via the listserv for Psychology majors and minors and linked to this webpage: <https://psychandneuro.duke.edu/gift>. All else being equal, preference is given to Psychology and Neuroscience majors (vs. minors or other students), individuals who have not yet received a matching or small grant, and those who have submitted their applications early.

#### **Contact:**

Email: [PN-undergrad-grants@duke.edu](mailto:PN-undergrad-grants@duke.edu)

### **P&N Undergraduate Grant for Virtual Conference Attendance**

During the Fall 2021 term, students will be able to request funding for **Mentor- or Faculty-Sponsored Virtual Conferences**, or virtual conferences recommended to them by their research mentors or other faculty members. No in-person conference attendance will be funded. In January, the Department will determine whether students may be funded for in-person conference attendance or other research-related travel during the Spring 2022 term.

Students who are interested in attending a Mentor- or Faculty-Sponsored Virtual Conference will submit a brief application that includes a letter of support from the research mentor or faculty member. All expenses required for attendance will be covered. It is hoped that the sponsoring research mentors and faculty members will help their students select programs to attend and assist them with networking while at the conference.

The call for Mentor-Sponsored Virtual Conference attendance will be issued in the fall, and will cover the Fall 2021 term (through December 13, the last day of final exams). A separate call for spring will be issued in January. All advertisements and calls will be distributed via the listserv for Psychology majors and minors and linked to this webpage: <https://psychandneuro.duke.edu/gift>.

#### **Contact:**

Email: [PN-undergrad-grants@duke.edu](mailto:PN-undergrad-grants@duke.edu)

## Library Resources

### **Literature Review Resource**

Ciara Healy, Librarian for Psychology & Neuroscience

The Librarian for Psychology & Neuroscience actively engages with faculty, students, visiting scholars and staff, providing and promoting library resources and services that support their work. She provides specialized research assistance and instruction to library users and develops and manages the Libraries' collections in the fields of psychology and neuroscience.

#### **Contact:**

Perkins Library 233

[ciara.healy@duke.edu](mailto:ciara.healy@duke.edu)

<http://library.duke.edu/about/directory/staff/5581>

(919) 660-5829

**Also, check out what the library offers students who are writing honors theses:**

<http://library.duke.edu/services/undergraduate/honors>

### **Elevated Borrowing Privileges**

After students register for Graduation with Distinction, they are eligible for “elevated borrowing privileges” (longer lending times for materials) at the library, and may be allowed to use a shared study carrel. Each fall, the Psychology Undergraduate Office sends the names of all GwD candidates to the library in order to secure these privileges for them.

### **DukeSpace**

DukeSpace (<https://dukespace.lib.duke.edu/dspace/>) is a repository for the theses, dissertations, and publications of Duke undergraduates, graduate students, and faculty. The documents in this repository are open to all. Although it is optional, we encourage our Graduation with Distinction students to upload their finalized theses to this repository, as follows:

- Navigate to <https://dukespace.lib.duke.edu>
- Login from the upper right corner of the screen
- Click on “My Account” → “Submissions”
- Click on “Unfinished Submissions” → “Start Another Submission”
- Select “Theses and Dissertations” → “Undergraduate Honors Theses and Student Papers” (should be the only option available in the drop-down menu)

Students with questions about this process should reach out to the Psychology Undergraduate Office.

## Writing Resources

### **The Writing Studio**

At the Writing Studio, you can meet with trained writing tutors to discuss your writing concerns. By discussing your work-in-progress with a trained tutor, you will develop the awareness and skills to improve as a writer.

Tutors help at any stage of the writing process – from brainstorming and researching to drafting, revising, and polishing a final draft. You may schedule a maximum of one appointment per day or two appointments per week, depending on availability.

All appointments are currently being held virtually. **To sign up for an appointment:** <http://twp.duke.edu/twp-writing-studio/appointments/appointment>

## Data and Analysis Resources

### **Social Science Research Institute (SSRI; <https://ssri.duke.edu/>)**

SSRI offers free consultation to Duke faculty, research staff and students who are involved in social and behavioral science research, on topics such as the following:

- Qualtrics survey software
- common statistical programs (e.g., R, SAS, SPSS, Stata)
- common statistical procedures
- survey design, sampling, the management of missing data
- model development
- content analysis and ethnographic research

Please note that due to funding cuts, requests from faculty and research staff/post-docs will receive priority. Graduate students and undergrads may request consultations, but the SSRI may not be able to grant them.

**Request a consultation:** [https://duke.qualtrics.com/jfe/form/SV\\_9HPQ3WNy8FZ9auO](https://duke.qualtrics.com/jfe/form/SV_9HPQ3WNy8FZ9auO)

## **Honors and Awards**

### **The Zener Award**

The Karl E. Zener Award recognizes a senior Psychology major who has shown outstanding performance and scholarship, as determined on the basis of both the honors thesis and the total academic record. The theses of nominated students are evaluated by a faculty committee appointed by the Director of Undergraduate Studies. The winner of the Zener receives a monetary prize, and his or her name is added to a memorial plaque in Zener Auditorium (Room 130 of the Reuben-Cooke Building). To be considered for this award, you must be nominated by your mentor; feel free to approach your mentor if you would like him or her to nominate you.

### **The Bruner Award**

The Jerome S. Bruner Award for Excellence in Undergraduate Research recognizes a Psychology major in the first term of his or her senior year for excellence in research activities, intellectual curiosity, and future potential for scholarly activity. Eligible applicants will have engaged in research, either as part of the Psychology major or under the supervision of a primary faculty member in Psychology & Neuroscience, during their junior year or the summer between junior and senior years. The award consists of a monetary prize and inclusion by name on a plaque in Zener Auditorium (Room 130 of the Reuben-Cooke Building).

## **Elements of Graduation with Distinction**

## **The Written Honors Thesis**

### **Overview**

The thesis is usually an empirical project, with original data collection and analysis, or secondary analysis of an existing data set. A full literature review and synthesis also may be acceptable, but most of the following information is more applicable to an empirical project, which generally is the norm for honors theses.

An empirical paper should contain the same elements that you find in most psychology journal articles: Introduction/literature review, Method, Results, and Discussion sections. As you read articles for your literature review, pay attention to the structure, form, and language of published empirical papers. Your final thesis should adopt a similar format and tone. The thesis should be written in American Psychological Association (APA) or American Medical Association (AMA) style, in manuscript form, as if it were to be submitted for publication in a journal (which should be the ultimate goal!).

The appropriate length of your thesis will be determined in consultation with your faculty mentor and will depend on the field of study. For example, empirical articles written about research in developmental psychology are usually much longer than those in neuroscience. Typically, however, manuscript length is 20-30 double-spaced pages, plus references and tables/figures.

A copy of the form used by your committee to evaluate your written thesis may be found in the [Appendices](#) of this handbook.

Below is a brief description of the specific elements of the thesis paper. See the *Publication Manual of the American Psychological Association* (6<sup>th</sup> ed.) for more in-depth discussion and tips for writing each section. A portion of the Distinction Thesis Workshop, or PSY 496, also may focus on this topic.

### **Abstract**

The abstract is a brief summary of your paper that should describe the problem you are investigating, the participants, the important features of the method, your basic findings, and the conclusions/implications/applications. Most people write this last.

### **Introduction and Literature Review**

Your paper should begin with an introduction to the problem or question you are investigating. This will lead into a substantive literature review that is relevant to the research question and sets the stage for your study. Don't be afraid to use section headings to break up a long introduction. This is helpful to your reader and can be helpful to you in terms of organizing your ideas. A "roadmap" of where you will be heading with the paper can also be helpful to your reader. You should be able to get a good feel for how the introductory section should be written and organized from the many articles you will be reading in order to prepare your literature review.

In the "current study" section at the end of the introduction/literature review, you will give an overview of your study, highlighting the ways in which it will contribute to the body of literature. You will also state your hypotheses and how they relate to the research design.

### **Method**

In this section, you will provide a detailed description of your study. Typically, this includes the following subsections:

- Participants – Describe your sample's demographic characteristics (e.g., age, sex, ethnicity/race, education level, SES, etc. – whatever characteristics are important to your topic). Also describe how they were recruited, how many there were, what percentage of those invited actually participated, etc.)
- Measures (or Materials) – Describe the measures used and what constructs they assess. Also include relevant data on the quality of the measures. Copies of measures may be included in the Appendices.
- Procedure – What did you do in this study? How did you do it? Describe your research design.

## **Results**

Summarize the data collected and the analyses performed. Report the results of all statistical tests relevant to the “story” you are telling in your thesis. Report results even if they are nonsignificant or if they are contrary to your hypotheses. Per APA format, tables and figures should follow your references.

## **Discussion**

In the final section, you will evaluate and interpret your results and discuss their implications. You should bring the discussion back to your original hypotheses, drawing inferences and conclusions from your results and citing sources as necessary to interpret your results. Include limitations/weaknesses of your study as well as future directions.

## **References**

References should be in APA format (or AMA format if your mentor suggests it). See the APA publication manual (7<sup>th</sup> ed.) for formatting guidelines. Other helpful resources:

<http://www.apastyle.org/>

<https://owl.english.purdue.edu/>

## **Appendix**

As noted above, you may include copies of your measures in the Appendix. See the APA manual for appropriate formatting.

## **Writing Resources**

See the Writing Studio for resources that can help you with organizing, drafting, and revising your work. You will also get additional writing instruction, tips, and some feedback on your writing in PSY 496.

## **The Research Poster**

### **Visible Thinking**

As a GwD student, you are required to take part in Duke’s Visible Thinking undergraduate research fair by presenting your work in the form of a poster. This is an exciting opportunity for you to share your work with a university-wide audience (rather than only your mentor and your committee)! Visible Thinking is a college-wide symposium held on Campus every April. Registration usually closes two weeks prior to the event.

### **What is a Research Poster?**

A poster is a static visual medium (usually printed on large glossy or matte paper) used to communicate ideas and messages. The difference between poster and oral presentations is that your poster will do a lot of the 'talking' for you. That is, the material presented should convey the essence of your message. However, that does not mean that you can disappear! Your task as a presenter is to stand by your poster, answer questions and provide further details for people who look at your poster; to bask in their praise or suffer their difficult questions, and to convince others that what you have done is worthwhile.

An effective poster operates on multiple levels:

- Source of information
- Conversation-starter about your research
- Advertisement for your research
- Summary of your work



## What is Included in the Poster?

Look at sample posters from your lab for inspiration. Typically, a poster contains the following information:

- Title
- Author's name and affiliation
- Introduction
- Method
- Results
- Discussion
- References
- Acknowledgments

Note: You will include very brief and basic information in each section. You will NOT cut and paste paragraphs from your written thesis.

## Layout and Formatting

- Follow the template provided by the department for your poster. Most people create their posters using PowerPoint.
- Keep it simple!
- Keep it visual!
- Use headings to orient readers and convey major points
- Use simple, clean graphics to convey relationships clearly
- Text should be simple, clean, and large. It's best to use at least 24-point for text and 36-point for headings on the poster template, but some things (e.g., References) may be smaller. People need to be able to read your poster from a few feet away.

## Preparing for the Poster Presentation

- Sign up for departmental poster printing.
- Make sure your poster is organized, readable, and draws the eye. If you include too much text, people will have a difficult time taking in what you have done. You need to summarize your study in a manner that makes it very easy for someone to grasp the main point – don't feel like you have to include everything in your poster.
- Have copies of your poster ready on standard paper, including your contact info.
- Have an "elevator speech" prepared – the 2-3 sentences that summarize the main point of your work and why it is important/memorable. This can be done in a number of ways, but should consist of catchy, easily understood sound bites that address:
  - What the study is about
  - Main findings
  - Why the study is important

## Resources

P&N prints posters for GwD students each year. You will also get poster design instruction, tips, and feedback on your poster draft in PSY 496. Following are some helpful websites and documents about poster creation:

### *From Duke*

- <https://undergraduateresearch.duke.edu/resources-presentations>
- <https://undergraduateresearch.duke.edu/sites/undergraduateresearch.duke.edu/files/file-attachments/poster-advice.original.pdf>
- <https://undergraduateresearch.duke.edu/sites/undergraduateresearch.duke.edu/files/file-attachments/poster-models-manuel.original.pdf>

### *From Elsewhere*

- <https://projects.ncsu.edu/project/posters/>
- <http://colinpurrington.com/tips/poster-design>

## **The Oral Exam**

### **Overview**

You will defend your thesis during an oral exam with your committee, which will consist of your committee chair (mentor) and two other individuals. The oral exam typically takes about one hour. During the oral exam, you will offer a brief (15-20 minutes) slide deck presentation (PowerPoint, Google Slides, Keynote). Following your presentation, your committee will ask you questions about your research.

During your thesis defense, your committee members will not be firing off questions at you in an attempt to expose you as an imposter in the field of psychology! Rather, the oral exam is more of a conversation. Your committee members pose questions and you respond with your ideas. Remember, you are an expert on this subject now. The committee is typically a very friendly audience that is rooting for the student to succeed. While it's normal to feel a little nervous, try to focus on the fact that the defense is your opportunity to share your work and discuss it in depth with mentors whom you respect.

### **Presentation**

Your presentation should be 15-20 minutes long. Remember, your audience (your committee) has read your paper and does not need every detail of the study. Spend some time introducing the problem/research questions and explaining why your study is important. Then walk the audience through your method and results. In the discussion session, give the audience some take-home points, address limitations and future directions, and ask for questions at the end.

During the PSY 496 Distinction Thesis Workshop, everyone practices their thesis presentations in class in order to receive feedback from the instructor and fellow students.

## **Helpful Hints for Graduation with Distinction**

## **Designing a Plan For Writing: Creating a Timeline and Sticking to It**

Adapted from Belcher, W. L. (2009), *Writing your journal article in 12 weeks: A guide to academic publishing success*. Sage.

The most common advice to students writing their honors theses is: “Start early!” This is easier said than done. Many students spend the last weeks of their senior year frantically analyzing their data and finishing up their theses, often resulting in “final drafts” that would have benefited greatly from a few more rounds of revision.

The mad dash to the end can be avoided! Below are some helpful hints for those of you who are committed to creating a timeline and sticking to it.

### **Creating a Timeline**

The elements of your thesis are the Introduction, Method, Results, and Discussion. Typically, GwD students spend the first semester collecting their data and working on their Introduction. This may vary based on your research topic, your mentor, and whether you are working with an existing data set. However, it is recommended that you have a solid draft of the introduction before the end of the first semester.

At the beginning of the year, sit down with your mentor and discuss your timeline. Set realistic goals for progress, and discuss strategies for staying on schedule.

### **Keys to Positive Writing Experiences**

1. **Successful academic writers *write*.** No matter how busy your life is, **make a plan for writing** (see below). If you write a little bit every day, your ideas will be fresh and you will make progress.
2. **Successful academic writers make writing social.** You are not in this alone! You have a class full of people who are in the same boat as you. Get over your fears about showing your work to others – and don’t worry about sharing a draft that is “not complete.” You won’t finish your thesis until the end of the year, and at that point it will be too late to get feedback. Consider forming a writing group or participating in one that takes place in your lab.
3. **Successful academic writers appreciate feedback – both the good and the “bad.”** Faculty members and graduate students alike have experienced rejection and criticism of their writing through the peer-review process. It is part of academic writing. It’s important to have a thick skin and know that any feedback on your writing is a gift. Don’t get discouraged or upset if someone has several suggestions on a draft of your writing – it is going to make your writing better! If you wrote a perfect first draft, you wouldn’t need a mentor!
4. **Successful academic writers pursue their passions.** If you write about something you are interested in and care deeply about, it will come a lot easier!

### **Designing Your Writing Schedule**

1. **Choose your writing site.** In order to form a habit of writing regularly, it will help for you take some time to think about which study site has worked best for your writing. Find a place where you can be productive and free from distractions.
2. **Design your writing schedule.** Many students think that they need long, uninterrupted stretches of time to write. However, studies have shown that writers who write a little bit every day produce more manuscripts than those who use extended writing sessions less frequently. Students often say they can’t write every day, but try this experiment: For one week, spend fifteen minutes each day writing for your thesis. See where it gets you—you may be surprised!

3. **Set a realistic writing goal with a firm deadline.** Talk to your mentor about setting realistic, specific deadlines for draft reviews. Keep yourself to the deadline; don't try to avoid your mentor! Firm deadlines will help you keep moving forward.

### **Roadblocks to Writing – and How to Overcome Them**

Below are some of the most common writing obstacles encountered by students. Which are your own personal roadblocks? Identify yours and think about ways to overcome them.

- **I'm too busy!** – Are you going to be less busy at the end of the second semester when your thesis deadline is approaching? Find the time! Make it a priority to write at least fifteen minutes a day.
- **My other classes take up all my time.** There is always more preparation, reading, and studying one could do for any class. The best solution is to set regular times for thesis work and to not let other responsibilities interfere with it. Protect your writing time!
- **I will write just as soon as I (fill in the blank).** Fine. It's really important for you to clean your apartment before you start working on your thesis. But just try doing 15 minutes of writing first!
- **I have to read just one more book.** It's easy to get bogged down in research. Each article leads to another, and then another...One more article is NOT going to make you an expert on the subject! Try doing your research and writing at the same time. Don't take endless notes and then feel overwhelmed because you have to go through all of them! You don't have to "finish" your research before you write. Start writing and find out what holes you have to go through and fill in.
- **I just can't get started.** Try getting started by writing poorly. Every sentence does not have to be perfect. Start out by just writing placeholders for ideas.
- **I'm not in the mood to write.** Start doing it anyway; soon you'll be in the mood!
- **I can't write because my idea sucks.** Allow yourself to develop ideas without critiquing them right away. Spend a couple pages fleshing out an idea and then find a classmate to talk about it with you.
- **My mentor is more of an obstacle than an aid.** Hopefully this is not a problem for any student, but if it is, try to find help elsewhere. A graduate student, a supportive writing group, another professor or TA. Don't let it stop you from moving forward. See "Tips for Navigating the Mentoring Relationship."
- **I can't sit still.** Try it for just fifteen minutes at a time!
- **I write too slowly.** Remember, no one churns out a perfect first draft! Most people plod along, writing two sentences and then deleting one of them, repeatedly reading and revising their work. With practice, you'll get faster. For now, just pat yourself on the back for spending time doing it!
- **I want to ask for feedback but everyone seems so busy and I don't want to bother them.** Try making feedback more social – ask a friend to exchange drafts. Start a writing group. And set clear check-in points with your mentor.
- **I get distracted with Facebook, emailing, and texting.** Try closing your browser when writing and turning off your phone. Don't make the mistake of thinking you'll get started after just a couple minutes of surfing.

### **Timeline**

Create a timeline for the academic year that indicates when you want to have certain milestones completed (e.g., draft of introduction, data collection, data entry, etc.). In addition, create a weekly timeline for your work toward those goals. Your mentor would be a good person to consult as you create this timeline.

If you have trouble finding the time to do the work, take an inventory of how you spend your time each day for one week. It may help you identify some ways you can maximize your time.

## How To Be a Good Mentee

Adapted from Neal, T. (2011, February). How to be a good mentee. *APS Observer*, 24(2).

<http://www.psychologicalscience.org/observer/how-to-be-a-good-mentee>.

(This article has been adapted to pertain to undergraduates rather than graduate students.)

Mentoring relationships are the bedrock on which much of higher education is built. Mentoring reflects a relationship between an experienced senior colleague (mentor) and a less experienced junior colleague or student (mentee), in which the mentor provides the mentee with resources, expertise, skills, and perspectives related to personal development and career advancement. The mentee is not a passive vessel into which the mentor pours knowledge but rather is a collaborator who actively engages in learning and critically reflects on experiences (Zachary & Fischler, 2009).

It is clear that healthy mentor/mentee relationships are important. Then the questions follow: *How can I be a good mentee? What can I do to make the most of my relationship with my mentor?* Mentees who are less knowledgeable about how to maximize the benefits of mentoring relationships receive less mentoring and are less satisfied with their mentoring relationships than are mentees who are better skilled at this task (Allen & Poteet, 1999). Allen and Poteet gathered information about important elements for successful mentor/mentee relationships. This is a summary of what they found:

1. Establish an open communication system with reciprocal feedback
2. Set standards, goals, and expectations
3. Establish trust
4. Care for and enjoy each other
5. Allow mistakes
6. Participate willingly
7. Demonstrate flexibility
8. Consider constraints to mentoring
9. Learn from others
10. Work on common tasks
11. Be open and comfortable

The first three elements are arguably the most important. Establishing open communication is important for the success of any relationship. Being able to be appropriately assertive and to speak about what you need or what is not working for you is important for your own development, and sharing with your mentor what is working and what is going well goes a long way in maintaining a positive relationship. Setting goals and expectations is crucial for the success of the relationship. As early in your relationship as you can, speak with your mentor about what s/he expects from you and what s/he expects to provide you. If those expectations do not line up with your needs, speak candidly about what else you might need.

Scheduling a regular one-on-one meeting time will structure your relationship and will allow you to feel comfortable knowing that you have undivided attention. **You must meet with your mentor every other week at a minimum.** Without regular meeting times, you may find it harder to make continual progress on goals, and it may be more difficult to complete degree requirements on time.

When you enter into a relationship with a mentor, it is important that you trust the motivation, interest, and ability of your mentor. If you have reservations, you should seek an alternative mentor if you are still in the phase of searching for one. If you are already in a less-than-perfect mentoring relationship, you have the option of 1) taking some time to examine yourself and your own behaviors to see how you might improve the relationship, and 2) speaking openly and assertively with your mentor about your concerns about the relationship.

Other advice for being a good mentee comes from Triple Creek Associates, a company that specializes in teaching skills to mentees who want to make the most of their mentoring relationships. The foundation of their advice rests on three “vital signs” of successful mentoring relationships: respect, responsiveness, and accountability.

1. Respect: Mutual respect is the starting and sustaining aspect of a successful mentoring relationship. Professional and personal appreciation of one another is core to enhancing learning.
2. Responsiveness: Your willingness to learn from your mentor and your mentor’s willingness to respond to your learning needs are important for successful collaboration. Be responsive to your mentor’s efforts to contact you and meet with you. Your mentor should not expect to wait two days to get a response to an email, for example.
3. Accountability: Once you and your mentor establish mutually held goals and expectations, keeping your agreements strengthens trust and helps maintain a positive relationship.

Establishing and cultivating a healthy mentoring relationship rests, to a large extent, in the hands of the mentee. Mentees who know what their own goals and expectations are and can communicate them clearly, who seek information about how to be successful in learning from mentors, and who carefully attend to their relationships with their mentors may reap many benefits. If you find yourself in a situation where you are not satisfied with the quality of your mentoring relationship, take a critical and honest look at yourself and your behaviors. What might you be able to do to improve your relationship with your mentor? If you have tried unsuccessfully to address the issues at hand, contact someone in the Undergraduate Psychology Office (Bridgette Hard or Angie Vieth), or discuss the issue with Makeba Wilbourn, the instructor for PSY 496.

#### References

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- Zachary, L. J., & Fischler, L. A. (2009). *The mentee’s guide: How to make mentoring work for you*. Hoboken, NJ: John Wiley & Sons, Inc.

## **Tips for Navigating the Mentoring Relationship**

Adapted from Rackham Graduate School at the University of Michigan (2015). *How to get the mentoring you want: A guide for graduate students*. <http://www.rackham.umich.edu/downloads/publications/mentoring.pdf>

As a GwD student, you are charged with developing and demonstrating your abilities to be an independent scholar and researcher. Your mentor's job is to guide you in this endeavor, but everyone has different styles of mentoring. Here are some tips for navigating the mentoring relationship.

### **Work Plan**

- Develop a plan that includes both short- and long-term goals, as well as a series of deadlines for completing each step.
- When situations arise that require modifications to your plan, discuss them with your mentor and agree upon a new work plan.
- Contact your mentor regularly to discuss your progress. Determine early on how frequently you will do this. If you feel you need more frequent contact than your mentor is providing, speak up and let him/her know.
- Remember to pursue additional resources for the assistance you need to achieve your goals. For example, SSRI can help you with data management and analysis.

### **Meetings**

- Schedule regular meetings and show up for them on time. **You must have meetings at least every other week, at minimum.**
- Take responsibility for leading the meeting. You raise the issues and questions; your mentor's role is to respond.
- Have an agenda for each meeting. What needs to be discussed? Prioritize your agenda items so you can be sure to have your most important questions answered first. Mentors truly value when students take initiative, show real intellectual curiosity about what they are studying, and show up to meetings with questions and ideas. Be sure to *take an active role* with your thesis process. Don't rely too heavily on your mentor to develop the work plan/timeline for you.
- After the meeting, summarize the meeting by writing up meeting minutes and email them to your mentor. This will give you and your mentor a written document that summarizes the points that were covered during your meeting, your goals/deadlines, and anything that you or your mentor agreed to do before the next meeting.
- If you need to cancel a meeting, do so as far in advance as possible and do not rely on one form of message: Send an e-mail and make a phone call to ensure your mentor gets the message.
- If your mentor is pressed for time when you have a scheduled meeting, try to be flexible. Offer to reschedule the meeting, shorten it, or handle it over e-mail.
- While you want to be flexible, you must remain committed to getting what you need in a timely manner. If your mentor repeatedly cancels meetings or does not respond to your attempts at communicating, don't give up. Try talking to a graduate student or another member of your mentor's lab. You also may talk to individuals in the Undergraduate Psychology Office or your thesis workshop professor.

### **Feedback and Editing**

- At the beginning of the year, discuss with your mentor how often he/she will give you feedback about your thesis progress.
- When you give your mentor a draft, ask when you can expect him/her to return it with feedback.
- Find out ahead of time if your mentor tends to provide a lot of comments or very few, to give you an idea of what to expect. That way you won't be surprised or worried if your paper comes back full of red marks, or with very few comments.
- Do not think your drafts have to be perfect before handing them in to your mentor. However, it is easier for a mentor to give good feedback if the draft is presentable. If you're not sure, ask a peer to read it over first.



- Do not ask your mentor to re-read a whole paper if only certain sections have been revised. Use track changes and comments to direct your mentor to areas in the paper about which you have questions or concerns.
- Do not take feedback from your mentor personally. Remember you are here to learn more about how to conduct research and write an empirical paper! However, if you disagree with a criticism raised by your mentor, show that you are willing to consider the point, but don't be afraid to demonstrate your ability to defend your ideas in a professional manner.

### **Professional Development**

- The mentoring relationship doesn't begin and end with the thesis. Your mentor can help you in many areas of professional development – talk to him/her about your future goals.
- Attend departmental lectures, colloquia, and job talks, and talk to your mentor about these activities. This type of initiative and intellectual curiosity can truly benefit your relationship with your mentor as well as your own professional development.

### **What to Do if Problems Arise in Your Mentoring Relationship**

Hopefully, establishing clear terms for a mentoring relationship at the beginning of the academic year will prevent problems between you and your mentor as you move through your senior year and towards GwD. However, occasionally situations arise that hinder timely progress on the thesis. If you have a problem that is preventing you from moving forward (personal or professional), take the initiative to contact your mentor and discuss the situation with him or her.

Similarly, situations sometimes arise for faculty members, too. Other demands on your mentor may hinder his/her ability to meet with you regularly or provide prompt feedback on your work. If this happens repeatedly, discuss this with your mentor. Tell him/her that you feel the need to develop a strategy that keeps your work on schedule.

If, after talking with your mentor, you still feel that you are not getting the support you need, talk to someone else. You may want to start by approaching graduate students or other students in the lab who may be able to tell you if the mentor's behavior is typical and/or might be able to suggest possible solutions. They may also be able to explain the norms for the frequency of meetings, the turnaround time for feedback, and the general availability of faculty. If you are not able to resolve issues with your mentor on your own, it is highly recommended that you ask for help. Individuals in the Undergraduate Psychology Office or your thesis workshop professor can clarify departmental expectations and standards, and may be able to provide suggestions for how to resolve problems.

## **Words of Wisdom from Former GwD Students**

Below are some tips provided by previous Psychology GwD students, arranged by topic.

### **Research Topic**

- Find a topic you're passionate about—it makes everything easier.
- Really choose a topic that you're curious about.
- GwD is a lot of work, so be sure you're truly interested in what you're researching.

### **Time Management**

- Start early. Create a timeline for yourself at the beginning of the year.
- Start early, even if it's just jotting down notes for what you want to include in each section of your paper.
- Schedule your defense earlier in the semester. There will probably still be a mad dash, but it will force you to finish your thesis sooner.
- Make sure you start on it early! Research often takes much longer than you would expect, and certain things may be beyond your control (e.g., time to get IRB approval, participant recruitment issues).

### **Relationship with Mentor**

- Your mentors (both faculty and graduate students) can make or break your experience!
- Work with a mentor you get along with and whose style is compatible with yours.
- If you want to meet more with your mentor and speed up the pace of your progress, be vocal.
- Make sure you are in really tight contact with your grad student mentor or faculty mentor. Be the squeaky wheel to ensure that you get through at least a few drafts back and forth between the two of you.

### **Resources**

- Use the SSRI help desk [Connection Bar] to your advantage. They were so helpful!

## **Appendices: Procedures and Policies, Forms**

## PROCEDURES AND POLICIES FOR RESEARCH INDEPENDENT STUDY IN PSYCHOLOGY

Courses entitled Research Independent Study (RIS) involve individual research in a field of special interest under the supervision of a faculty member, the central goal of which is a substantive literature review or write-up of an empirical study. Such Research Independent Study courses bear a Research (R) code and thus satisfy general education research requirements. One RIS may be approved for a Writing (W) code in addition to the R code, but no other curriculum code designations are permitted for RIS courses. For students who matriculated prior to Summer 2018, one RIS also may be used to fulfill the major's Depth Requirement (the Depth requirement does not apply to students who matriculated from Summer 2018 onward). Students should indicate on the proposal form if they would like the RIS course to count towards the Depth Requirement, as such credit will not be given automatically. Students who wish to request a W code for one RIS course must submit a request [form](#) to the Undergraduate Psychology Office (235 Reuben-Cooke), in addition to completing the proposal. All forms are due at least one week before the end of Drop/Add.

Students interested in completing a significant research project during their undergraduate career may want to consider the Graduation with Distinction Program (GwD). This is especially important for students planning to pursue graduate school in psychology, but is recommended for any student with a strong interest in research. The table on the following page offers a comparison of requirements for Research Independent Study and GwD.

### Procedures

- Students wishing to register for a Research Independent Study first must make arrangements with a faculty member having expertise in the desired area. The student and faculty supervisor should agree on the course title, plan of study, objectives, and expectations, as well as on the nature of the final product and the criteria for evaluating it. This information will be specified on the application form.
- The student must submit the Research Independent Study proposal form at least one week before the end of Drop/Add for the term in which the RIS is to be taken. After the form is processed, the student will receive a permission number to register for the course.

### Policies

**Approval** – The Research Independent Study proposal must be negotiated with/reviewed by the faculty supervisor(s) involved. There is no need to get the DUS's signature before submitting the proposal. If there is any problem with the proposal, the Undergraduate Psychology Office will get in touch with the student.

**Faculty Supervisor** – The Research Independent Study is generally supervised by a faculty member who holds a primary or joint graduate training faculty appointment within Duke's Psychology & Neuroscience Department. In some cases, a faculty member holding a primary appointment outside P&N may supervise the bulk of the RIS, either with special approval from the DUS, or with another faculty member serving as the "instructor of record." The instructor of record is responsible for submitting the final grade, and ensuring that the research supervisor adheres to the policies and procedures outlined in this document.

**Course Content / Quality** – The Research Independent Study must provide a rigorous academic experience equivalent to that of any other undergraduate course at Duke. RIS courses may not duplicate available course offerings during the term in which the RIS is being taken, nor may RIS be used simply to provide low-level support for other projects or to observe or shadow the work of others.

**Work/Meeting Schedule** – The student is expected to work an average of at least 10 hours per week on his or her project. Furthermore, the student and faculty supervisor must meet at least once every two weeks during the fall or spring semester, or at least once per week during the summer.

**Final Product** – The student will produce a final academic paper (e.g., empirical paper, literature review) before the end of the term. The specific due date will be negotiated with the faculty supervisor.

**Grading** – The faculty supervisor will evaluate the work the student has performed, including the final paper, and submit a grade at the end of the term. If the research supervisor is someone other than the instructor of record, this supervisor will communicate the final grade to the instructor of record, and the instructor of record will submit the final grade.

\* For policies and procedures related to research independent study courses in Study Abroad/Away Programs, see [The GEO Student Handbook](#).

### Comparison: Research Independent Study and Graduation with Distinction

<b>Getting Started</b>	<p>Consider topics/areas that interest you most</p> <p>Learn about faculty research interests on the <a href="#">P&amp;N website</a>, 'People' tab</p> <p>Discuss possible projects with relevant faculty</p> <p>Establish an agreement for working together</p> <p>Complete the Research Independent Study proposal form</p>
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	<b>Research Independent Study</b>	<b>Graduation with Distinction</b>
<b>Goals</b>	Learn how to develop a research question, study it, and report the results	Develop an original research question, test it empirically (with data analysis), write a thesis for a professional audience and possible publication, and complete an oral exam
<b>Duration</b>	One or more semesters (only two may count toward the major); Student and faculty supervisor meet at least every other week	Minimum of two semesters (only two may count toward the major); Student and faculty supervisor meet at least every other week
<b>Final Product</b>	If the student plans to complete the research over a period of two or more semesters, he or she must complete a final paper to be graded at the end of each term. For example, a student completing an empirical project may submit the introduction and methods of research at the end of the first semester, and the final draft of the complete manuscript at the end of the second semester.	
<b>Types</b>	<i><b>Empirical Project</b></i> , with original data collection and analysis; or secondary analysis of existing data; <i><b>Literature Review</b></i> (review and synthesis article)	Usually an <i><b>Empirical Project</b></i> , with original data collection and analysis; or secondary analysis of existing data; <i><b>Full Literature Review and Synthesis</b></i> also acceptable
<b>Format</b>	Usually APA style or similar; AMA style or similar if more relevant for medical journals	Usually APA or AMA style; in manuscript form or close, as for publication
<b>Length (double spaced)</b>	Empirical Project: approximately 15-25 pages of text, plus references and tables/figures as relevant; Literature Review: minimum 20 pages, plus references	Whatever length is appropriate, as determined in consultation with the faculty mentor; Typical manuscript length is 20-30 pages plus references and tables/figures
<b>Literature Review</b>	All papers must include a literature review that conveys what is currently known as well as any gaps in the research, and must reference at least 12 articles from peer-reviewed journals	Substantive literature review relevant to the research question plus additional citations as needed for the interpretation of results
<b>Oral Exam</b>	None	Minimum one-hour oral exam with committee (faculty supervisor plus two others); Focus = final paper (distributed to committee at least one week in advance of the defense)

## PROCEDURES AND POLICIES FOR GRADUATION WITH DISTINCTION IN PSYCHOLOGY

Graduation with Distinction (GwD) in Psychology recognizes undergraduates who conduct an independent research project that results in a scholarly thesis and oral exam/defense before a faculty committee. Participants must meet minimum GPA requirements, devote at least two semesters of research to the project, and complete the associated thesis preparation course before defending the thesis and presenting the research to Duke's academic community. Participation in the program is noted on the transcript during the senior year and successful completion results in acknowledgment on the transcript and at graduation ceremonies. Exceptional theses may be nominated by the faculty mentor for consideration for the Zener Award, presented annually to an outstanding graduating senior in Psychology. Specific requirements of the Psychology GwD program include:

- **Overall GPA of 3.0 and major GPA of 3.5.** Applicants must expect to have an overall GPA of at least 3.0 and a Psychology GPA of at least 3.5 at the end of the fall term of their senior year. GPAs are not rounded up. Grades in independent study courses in Psychology (whether research or non-research directed) and the Distinction Thesis Workshop do not count towards the major GPA. In cases where the student's *final* GPA (end of spring term of senior year) falls just below the required cut-off, his or her faculty mentor may petition the Director of Undergraduate Studies for Psychology to permit the student to graduate with distinction.
- **IRB Approval.** Students are required to obtain IRB approval for their projects before enrolling in the Distinction Thesis Workshop, or PSY 496 (see below). Any exceptions to this policy require the approval of the Undergraduate Psychology Office. Because obtaining IRB approval may require significant time and effort, students should learn what is involved as early as possible.
- **Completion of two semesters of Research Independent Study (RIS) related to the project.** Research Independent Study courses are one-credit courses. Only two independent study courses in Psychology (whether research or non-research directed) may count toward major requirements, and grades in these courses are not included in the calculation of the major GPA. Most students complete both required RIS courses during the senior year, but this is not true for everyone.  
**Completion of PSY 496, the Distinction Thesis Workshop.** This is a one-credit course taught during spring semester only. It may count toward major requirements but the grade in this course is not included in the calculation of the major GPA. This course is taken during the senior year for students planning to graduate in May, and during the junior year for students planning to graduate in December.
- **Completion of a substantial written thesis/research project under the mentorship of a faculty member in P&N.** The thesis mentor usually serves as the chair of the student's thesis committee.
- **Successful completion of an oral exam before a three-person faculty committee.** The committee chair generally holds a primary or joint graduate training faculty appointment in P&N. (Other P&N faculty may be able to serve as chairs with special approval from the DUS, or with another faculty member serving as the 'chair of record.') The second committee member may hold a primary, joint, or secondary appointment in P&N. The final member may be a P&N faculty member, post-doc, or graduate student, a faculty member from another department at Duke, or a faculty member from another institution. (A current list P&N faculty may be found <https://psychandneuro.duke.edu/> under the 'People' tab.)
- **Poster presentation at the Visible Thinking undergraduate research fair in April.**

Applications must be submitted via Qualtrics form by the last day of regular registration for the term in which the thesis will be defended: for a fall defense (uncommon), Fall registration in March/April; for a spring defense, Spring registration in October/November). Each term a link to this application form will be posted on the Psychology & Neuroscience website. Please note that the application form requires the student to identify all three committee members.

**Student Name:** \_\_\_\_\_

<b>Evaluation of the Written Thesis</b>					
<b>Score</b>	1	2	3	4	5
	Strongly disagree ----- Strongly Agree				
	1. The paper adequately reviews the literature, demonstrates how the student's research fills a gap, and presents a compelling argument for the significance and scientific value of the student's research.				
	2. The paper clearly and explicitly articulates the research question(s) or goals of the study.				
	3. The paper describes the methods and measures used in the study in a manner that provides a clear understanding of what was done.				
	4. The analyses are appropriate to test the hypotheses of the study and clearly map onto the main study questions.				
	5. The tables and figures in the results section are clear and informative.				
	6. The discussion section provides a compelling discussion of the implications of the findings.				
	7. The discussion section identifies appropriate limitations of the study and suggests how those limitations could be addressed in future work.				
	8. The paper is clearly written and includes significant definitions and explanations to make the research accessible and engaging to readers not familiar with the field.				
	9. The paper is virtually free of obvious errors such as typos, misspellings, grammatical errors, etc.				
	10. The paper is written in a manner consistent with APA guidelines.				
<b>Please check one of the statements below.</b>					
<input type="checkbox"/>	This paper is definitely not of publishable quality.				
<input type="checkbox"/>	This paper is potentially publishable but would require substantive revisions.				
<input type="checkbox"/>	This paper is potentially publishable but would require substantive revisions as well as a larger sample and/or additional experiments.				
<input type="checkbox"/>	This paper is potentially publishable with minor revisions but would require a larger sample and/or additional experiments.				
<input type="checkbox"/>	This paper is potentially publishable with minor revisions.				

Student Name: \_\_\_\_\_

Evaluation of the Oral Presentation of the Thesis					
Score	1	2	3	4	5
	Strongly disagree ----- Strongly Agree				
	1. The student clearly articulated the research question(s) or goals of the study.				
	2. The student described the methods and measures used in the study in a manner that provided a clear understanding of what was done.				
	3. The slides and visual aids used in the presentation were clear and informative.				
	4. The student provided a compelling discussion of the implications of the findings with regard to the study question(s) or goals, policies and/or practices, and next steps in the research process.				
	5. The student described the limitations of the study and suggested how those limitations could be addressed in future work.				



# Report on Examination of Candidate for Graduation with Distinction in Psychology

**2021-2022 Academic Year**

Upon examination of \_\_\_\_\_, a candidate for the

☐ **A.B.** ☐ **B.S.** degree with a major in Psychology, we

☐ **recommend** ☐ **do not recommend**

that the bachelor's degree be awarded with distinction.

Date of Examination \_\_\_\_\_

Title of Thesis

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**Chair**

_____ Printed Name	_____ Signature
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**Committee Member**

_____ Printed Name	_____ Signature
-----------------------	--------------------

**Committee Member**

_____ Printed Name	_____ Signature
-----------------------	--------------------

**Director of Undergraduate Studies**

_____ Printed Name	_____ Signature
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**For Office Use Only:**

Overall GPA \_\_\_\_\_ Major GPA \_\_\_\_\_