

Psychology 360/361 – Research Experience in Psychology
Winter 2019, Tues/Thurs. 6th hour
Instructors: Frank McAndrew (360) & Heather Hoffmann (361)
Other mentors: Andy Hertel, Tim Kasser, & Kara Moore

Course Description

This course is a two-term research-based experience in which students conduct an independent research project. Regardless of students' plans for after Knox, the senior research project they conduct will provide them with concrete evidence of their ability to pose interesting questions, find relevant information, make compelling arguments, design means of answering questions, analyze and interpret data, and communicate difficult material to other people.

The department has already assigned all students to a faculty mentor, with whom they will spend two terms working on their research project. All work conducted for this class should be turned in to the mentor, who is responsible for guiding students through the various steps of this class. The professor running this seminar is only responsible for organizing some of the experiences had by all of the senior research students. Naturally, there will be some variations among what different mentors will expect of students, and mentors are free both to make assignments in addition to those listed below and to set additional deadlines for the completion of work. All grades will be assigned by a student's mentor. Despite differences across mentors, all Psychology department mentors agree on the essential requirements for the class, the methodological guidelines for students' studies, and the general philosophy of grading students' work.

Essential Requirements

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By the end of this term students will have completed the Introduction & Method sections of a research paper in accordance with the guidelines established by the *American Psychological Association Publication Manual* (6th Ed.).

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By the end of this term, students will have successfully submitted an ethics proposal to the Institutional Review Board, completed the collection and analysis of data, written a complete, article-length research paper in APA format, and made a poster presentation of the project to the Psychology department faculty and other students in the department. It is also expected that students will present the results of their research at the ILLOWA Undergraduate Psychology Conference to be held at Knox on April 20, 2019.

Methodological guidelines

The Psychology Faculty has agreed that senior research projects will usually have at least one of the following methodological components:

- 1) The study is a true experiment in which an independent variable is manipulated to observe its effects on a dependent variable. A study considering race, gender, etc. as the independent variable does not meet this expectation, as such variables are not manipulated by the experimenter.

- 2) The study is a quasi-experiment or correlational study that includes a difficult-to-obtain sample, i.e., a sample other than North American college students or rats. For example, the sample may be composed of children, elders, adults receiving mental health services, college students outside of North America, etc.
- 3) The study is a quasi-experiment or correlational study in which one of the main variables is operationally defined by using a method that the student has devised. This might involve the construction of a new questionnaire, coding system, etc. The student must also test the reliability of the measurement that s/he has devised.

Grading philosophy

The Psychology professors agree that the following variables are involved in assigning grades for PSYC 360/361. Individual mentors may of course put different weight on variables, or may add other requirements for their students.

- 1) Working Independently. We expect students to show self-motivation and the ability to engage in the various aspects of the project without the mentor overseeing every detail. Projects in which the mentor finds himself/herself doing much of the work will be considered less acceptable. However, please understand that we expect and encourage students to frequently ask their mentors for help and advice; we don't expect to do the work for students, however.
- 2) Ambitiousness and Creativity of the Project. Higher grades will be awarded to projects that are theoretically ambitious because they test novel ideas via creative means and/or that involve more work in the running of subjects and/or the design and/or implementation of the methodology.
- 3) Quality of Writing. We expect all work to follow the *American Psychological Association Publication Manual* (6th Ed.). Further, all drafts of papers should follow the Psychology Department Writing Policy, available at: http://departments.knox.edu/psychdept/Psych_Writing_Policy.html
- 4) Completion of All Assignments. Although some of the assignments and sub-assignments in this class are essentially ungraded, we expect students to complete all requirements. That is, they must: (a) meet all deadlines set by individual faculty mentors, (b) successfully submit an ethics proposal to the Knox College IRB, (c) make a poster presentation (361 only), (d) attend poster presentations on days they are not presenting (all students), and (e) turn in papers at the end of each term.
- 5) Promptness. We expect students to be on time for meetings with their mentors and for their presentations, and to turn in assignments on the dates set by the mentor.
- 6) Effort and Diligence. We expect students to continue to work hard and persist at the project.
- 7) Statistical Significance. Finally, one factor that will **NOT** affect students' grades concerns whether hypotheses are supported. Thus, students will not be graded down if their results are non-significant. Conversely, students will not necessarily receive a good grade if their hypotheses are supported. Note however that projects that are well thought-out and that are well executed methodologically are more likely to yield significant results, and thus may receive higher grades for those reasons.

Grading in the two terms

Around the *middle* of the first term, mentors will informally provide students with a **tentative** mid-term grade. At the *end* of the first term of senior research, the mentor will again informally provide students with a **tentative** grade if the work to date is satisfactory; in such cases, the student's grade will be recorded as S (for passing/satisfactory). However, if the work to date is judged by the mentor to be **not** satisfactory, the student will receive the letter grade (C- or lower) that the faculty member assigns.

Around the *middle* of the second term, mentors will informally provide students with a **tentative** mid-term grade. At the *end* of the second term of senior research, if a student received an S for the first term, the mentor will replace the S for 360 with a final letter grade and will assign a final letter grade for 361. If a student received a letter grade for the first term (i.e., a C- or lower), *that letter grade will remain on the student's transcript* and a final grade will be assigned for the second term. (In the case that the capstone involves a college requirement that must be a C or higher, the grade from the second term will be the one used to meet this mark.)

Relevance to Departmental Learning Goals

The psychology department has seven goals that inform its curriculum. PSYC 360/361 works towards five of these goals. First and foremost, the course will help students “effectively and ethically apply the scientific method to studying the mind, the brain, and behavior” (Goal 1), as the process students will undertake is primarily about how to design and conduct a research project that meets standard ethical principles. Second, the course will help students “successfully search the scientific psychological literature to find existing work that can inform the specific claims they are making” (Goal 2), as this process is fundamental to what students will do in PSYC 360 as they read the literature about their topic and develop a hypothesis. Third, the course will help students to “select and conduct appropriate statistical tests in order to empirically test a claim” (Goal 4), as all projects will be empirical in nature and require statistical testing. Fourth, the course will help students to “effectively communicate with clear, grammatically-correct writing that conforms to APA style” (Goal 5), as students will go through multiple drafts of all sections of their paper and receive frequent feedback on their writing. Fifth, it will help students to “make effective oral presentations that are clear, well-organized, and interesting” (Goal 6), as students will have to briefly present on their topic in the combined 360 class and present their work in a poster session at the end of 361.

Helpful Resources

The department has developed a website with a variety of helpful and necessary resources for students conducting research: <http://departments.knox.edu/psychdept/studresinfo.html>. The website includes information concerning how to recruit subjects, how to obtain ethics approval, writing well and in APA format, and other resources. If students are running a lab study in which they (or their research assistants) will come into direct contact with human subjects, they should read the section concerning safety guidelines.

Course Schedule: Psychology 360

During the term, students will meet primarily with their mentor, whom they should contact early in the term to set up meeting times. In addition, we will meet as a class a few times throughout the term. Almost all class meetings will be 6th hour (2:40-3:50) Tuesday in SMC D-213, except for the Poster Sessions, which will be in the Psychology Wing.

<u>Date</u>	<u>Meetings</u>	<u>Assignments</u>
January 8	Introduction to Senior Research	Review syllabus and meet with faculty mentor
January 15		
January 22		
January 29	Your Future in Psychology	None
February 12		
February 19	Mid-term check-in	Give brief presentation on progress ¹
February 26		
March 5	Attend 361 poster session	
March 7 (Thursday)	Attend 361 poster session	
FINALS		Final paper due; date set by mentor

Notes:

1. Class presentations will be informal and brief (approximately 2-3 minutes). For the presentation, students will describe the literature they've been reading, their research question, and their hypothesis.

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<u>Date</u>	<u>Meetings</u>	<u>Assignments</u>
January 3	Introduction to Senior Research	Review syllabus and meet with faculty mentor before next class
January 10	Qualtrics Review	
January 17		
January 24		
January 31		
February 7	SPSS Review	
February 14	APA Format and Writing Results Review	
February 21	Workshop on Making Posters	
February 28		
March 5 (Tuesday)	Poster Session I	Poster presentation during one of the sessions
March 7	Poster Session II	Poster presentation during one of the sessions
FINALS		Final paper due; date set by mentor