

**Psychology 486**  
**Comprehensive Research Project**  
**Fall 2015**

TuF, 1:00-2:20  
LBC 211

Instructor: Rachael Reavis  
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Office Hours: Mondays 3:00 – 5:00 – sign up on Moodle  
(drop-in & by appointment as well)

Instructor: Beth Mechlin  
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Twitter: @PsychProfBeth  
Office: LBC 307  
Office Hours: drop-in & by appointment

### **Course Readings:**

#### ***Required:***

6<sup>th</sup> Edition of the APA manual

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

Additional course documents on Moodle

### **Course Description & Objectives:**

This course is really about you and what you have learned as a psychology major. It is an opportunity for you to explore a specific research question of your own making. Even if you are not going into a research field, you will gain an important perspective on how research is really conducted that will benefit you in whatever career you find yourself. Research is exciting and fun, but it is also hard work. Take your topic selection seriously, because you will be spending many hours across several months immersed in your topic. If you aren't fascinated by your topic in the beginning, you aren't likely to be by the end. During the course of the semester you will demonstrate and improve upon all the skills you have acquired during your years as an Earlham psychology major, culminating in a final paper and presentation to the department. If all goes well, you will also have contributed to our understanding of psychological phenomena and processes.

### **Specific Course Goals**

By the end of the semester, you should be able to:

1. Design and implement a research study.
2. Analyze data and report results in written and spoken work.
3. Understand the role of research in psychology, and identify its strengths and limitations.
4. Communicate effectively with a variety of audiences.
5. Understand psychology as a science.
6. Critically evaluate existing work.
7. Provide helpful, but constructive, feedback to work in progress.

### **Psychology Department Goals**

The following psychology department goals (based on the APA guidelines) are especially relevant for this course.

1. Research Methods in Psychology
2. Critical Thinking Skills in Psychology
3. Application of Psychology
4. Values in Psychology
5. Communication Skills
6. Information and Technological Literacy
7. Communication Skills

## Earlham College Learning Goals:

The following general education goals are especially relevant for this course.

1. Communicate
2. Investigate
3. Integrate
4. Create

## Course Credit Explanation

Following the successful completion of PSYC 486, you will earn three course credits. The federal expectation of each credit hour is one hour of class per week, plus a *minimum* of two hours of work per week outside of class (<http://www.ecfr.gov/cgi-bin/text-idx?rgn=div8&node=34:3.1.3.1.1.1.23.2>). This means a minimum of nine hours of work devoted to a three-credit class each week. Many classes will require more work and preparation outside of class, and PSYC 486 is likely to be one of those. Anticipate spending an *average* of 10-15 hours per week devoted to your senior research project. (That means that some weeks you may spend even more than that on the project.)

## Evaluation:

Your final grade will be based largely on your final paper and presentation, but also on your ability to meet deadlines, your ability to respond appropriately to criticism, and your participation in the class, which will be taken very seriously.

- 1) **Attendance.** Attendance will be taken every day, and lateness will be noted. Some days will be designated as “independent work” days, but **you are still expected to come to class and check in.** Doing a full and well-executed research project in one semester is a significant task, and it is easy to fall behind and hard to catch up. Your attendance will count for **5% of your grade.** However, if you **miss more than four classes,** we will have a serious discussion about you withdrawing from the class. If you are hospitalized or have a death in your immediate family, we will work together to determine whether you can complete the course or should take an incomplete. Please note that **attendance is expected at all presentations,** even if you are not scheduled on that day.
- 2) **Effort.**
  - **Participation.** You will be part of working groups of 3-4 people. You will be brainstorming about ideas, helping others to refine their ideas, reading each other’s drafts, providing constructive feedback, responding constructively to feedback, and other supportive endeavors. Your participation grade will be based on what we observe, a self-evaluation of your performance as a group member, and an evaluation from each of your group members about your contributions.
  - **Drafts.** Research and dissemination (writing and presenting) require a lot of drafting. The first thought you think or the first draft you write will not be polished. This is true for novice and seasoned writers alike. Furthermore, draft deadlines help you stay on schedule. If you follow the deadlines in the syllabus, then you will be able to complete your project in time. If you don’t, then you will run the risk of not completing your project and your grade will suffer. If you would like to turn in drafts more frequently than what is listed on the syllabus, please just let us know. Part of your grade will also be based on your ability to incorporate (or thoughtfully explain why you are not incorporating) both instructor feedback and the feedback of your working group. Failure to respond to or incorporate feedback will negatively affect your grade.
  - **Effort** will account for **5% of your final grade.** There are two important aspects to notice. First of all, displaying very little effort during the semester can have a large impact on your grade (a full letter grade). However, the bulk of your final grade will be based on the final product of your paper and presentation. Simply stated, this is not an “A for effort” project, but a lot of effort is needed to do a good job.

- 3) **Final Paper.** Your final paper will be graded for the design of your project, conceptual and theoretical soundness of your project, writing (including clarity and grammar), and APA style. Your paper grade will be based on instructor evaluation (**25% of your final grade**) and the evaluation of your second reader (**25% of your final grade**). To pass this portion of your comps, both your instructor and second reader need to judge your paper to be at least a C-. See below for the graduation requirement. Please note that excellent papers require many, many drafts. We will make suggestions for major problems we see in each draft. Don't be surprised, however, when the next draft also has many suggestions. Although it can be frustrating, this is the nature of the writing process. The more you let us see your work, and the more effort you put into making changes (or justifying why you do not agree with those changes), the better your paper will get. We encourage you to focus not on getting a particular grade, but on doing the best work that you can.
- 4) **Final Presentation.** Your presentation grade will be based on the clarity of your message, the eloquence of your delivery, and the thoughtfulness of your responses to audience questions. Like your paper, presentations require many drafts and new comments and issues will be identified in each draft. Your presentation grade will be based on instructor assessment (**20% of your final grade**), which will be influenced by your incorporation of suggestions from your instructors and your classmates. The psychology and neuroscience professors present at your talk will also assess your performance. Their assessments will be averaged and that average will account for **20% of your final grade**.
- 5) **Final Grade & Graduation Requirement.** There are two key components to successfully completing this portion of your comprehensive exam in psychology or neuroscience: the final paper and the oral presentation. If you complete both components by the end of the semester and the paper is judged by both your first and second readers as at least a C-, you will have passed this portion of your comprehensive exam. If you fail to complete one of the portions (paper or presentation) by the end of the semester you will receive a D- in the course. If this occurs in the fall semester, you will have until the day of enrollment confirmation prior to beginning of the spring semester to satisfactorily complete the course requirement. The grade may be changed at that point from a D-. If you do not complete either component (you fail to complete *both* the paper and the presentation), you will receive an F for the fall semester and will need to re-take senior research in the spring. You may be able to use the project you started in the fall.

### Grading:

Rachael/Beth's assessment of the final paper:	25% of grade	A-: 90-92.9%; A: 93%-99.9%; A+: 100% B-: 80-82.9%; B: 83-86.9%; B+: 87-89.9% C-: 70-72.9%; C: 73-76.9%; C+: 77-79.9% D: 65-69.9% F: < 65%
2 <sup>nd</sup> reader's assessment of the final paper:	25% of grade	
Rachael/Beth's assessment of the final presentation:	20% of grade	
Average of other faculty assessment of final presentation:	20% of grade	
Attendance:	5% of grade	
Effort/Deadlines:	5% of grade	

*We do not round grades. For example, 79.9999 is a C+, no exceptions. Please note the grading scale—it may be different from other classes you have had.*

**Office hours etiquette:** We are happy to schedule times to meet with you outside of class. We anticipate that all of you will need to meet with one of us at least once, and many of you will need to meet with us several times. You are welcome to drop in. Please be understanding if we are in the office, but preparing something else. We can pick a time then for you to come back, if that is the case. You can also make appointments with us in class or via email. Students can sign up on Moodle to meet with Rachael. She has times posted every Monday from 3:00- 5:00. During that time, please sign up for a time rather than dropping in. At other times during the week, you may drop in. Please be courteous and arrive on time for your meeting. If you arrive late or do not come (without informing us well in advance), then this takes away from time we could be spending with other students. If you cannot make it to your scheduled appointments, then we may have to limit our meetings to class time and via email.

**Email Etiquette:**

You are encouraged to contact us via e-mail with any questions that you may have, but we ask that you make sure you have looked for the answer yourself first (on Moodle, in course documents) and that you correspond professionally. We can also use email to schedule a time to meet in person.

**Technology guidelines<sup>1</sup>:** You need to protect yourself against technology problems. You need to develop work habits that take potential technological problems into account. These habits will serve you in your career. Technological problems are a fact of life, and are not considered unforeseen issues. (Your dorm falling into a sinkhole would qualify as “unforeseen”). Start early and save often. Always keep a backup of your work. Carbonite and Backblaze are two services that will automatically back your work up into a cloud. Or you can invest in an external hard drive. Or you can email yourself your work.

Computer viruses, lost flash drives, corrupted files, incompatible formats, WiFi connectivity problems – none of these unfortunate events should be considered an emergency. Take the proper steps to ensure that your work will not be lost forever. Learn the locations and operating hours of all the computer labs on campus. Do not procrastinate. Know the resources on campus for technical problems with connectivity or Moodle. The Help Desk will need time to assist you. Again, don't procrastinate.

**Academic Honesty:**

All students are expected to conduct themselves with honesty and integrity in this course. The honor code is both a privilege and a responsibility, and you are expected to take it seriously. Suspected infractions, such as plagiarism, fabrication of data, and cheating will be treated seriously and will be reported. Furthermore, if you are aware of a violation of academic integrity, it is your responsibility to take action.

Learning to think for yourself, assess information judiciously, and speak and write effectively in your own voice is at the heart of a liberal arts education and global citizenship. Treasure and cultivate these skills. Papers and other work, including digital creations, downloaded or copied from other sources, or in which words or ideas belonging to others have been deliberately misrepresented as your own, will receive an automatic F, as they thwart your learning process and damage the integrity of knowledge-discovery. If you have questions about how to find, integrate, and properly cite sources, never hesitate to ask for help.

An excellent place to find help in knowing when and how to cite others' work appropriately can be found on the Libraries page: [http://library.earlham.edu/friendly.php?s=academic\\_integrity](http://library.earlham.edu/friendly.php?s=academic_integrity). The site also includes Earlham's full statement on academic integrity and procedures for addressing academic violations of the Student Code of Conduct.

**Writing Center:**

The Writing Center can help you with both your presentation and your paper at any point throughout the process. We encourage you to take advantage of this resource. [www.earlham.edu/writing-center](http://www.earlham.edu/writing-center)

**Counseling Center:**

Senior year can be a stressful time. If you need to talk to someone, please don't hesitate to contact counseling services: <http://www.earlham.edu/counseling-services/>

**Students with Disabilities:**

Students with a documented disability (e.g., physical, learning, psychiatric, visual, hearing, etc.) who need to arrange reasonable classroom accommodations must request accommodation memos from the Academic Enrichment Center and contact their instructors each semester. For greater success, students are strongly encouraged to visit the Academic Enrichment Center within the first two weeks of each semester to begin the process.

<http://www.earlham.edu/policies-and-handbooks/academic/policy-on-student-learning-disabilities/>

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<sup>1</sup> Drawn from material by George H. Williams

## Schedule of Topics & Assignments

Please note that this schedule is tentative and may change as circumstances require.

Readings are due the day they are listed.

**Bold** borders indicate something is due. **Shaded** cells indicate something is due to Beth/Rachael. Non-shaded cells indicate working group assignment or end-of-semester presentation.

8/28	Introduction; questionnaire; initial topics; assigning working groups; sign up for library instruction; academic integrity; Qualtrics introduction; SPSS introduction
9/1	Discussing research question and/or study design in working groups. At the end of class, each person will show Rachael & Beth either a design sketch or a relatively long list of potential search terms and search term combinations.
9/4	<p><b>Summaries of 5 articles due in class.</b> Be prepared to discuss them with your working groups.</p> <p><b>IRB training cert. (see Moodle) due in class</b></p> <p><i>Topics due on Moodle by 11:59pm</i></p> <p>What you submit should be as detailed as possible. If you have a good design idea, then submit that.</p>
9/8	<p>In class: What makes a good introduction? Making a concise literature review in PowerPoint</p> <p><b>Assigned Reading: Chapter 4 “Introducing your Research Report”</b></p> <p><i>Rough Intro Presentation Slides due 9/9 by 11:59pm on Moodle</i></p>
9/11	<p>In class: Be prepared to present your intro presentation to the class and/or to your working group. Bring slides. Bring a laptop, if possible. Take notes on areas of research lacking as well as on presentation style. If time, start working on your written introduction.</p> <p><b>Email or give each member of your working group a draft of your introduction by 9/12. Return edited drafts to workgroup authors by class time on 9/15.</b></p>

<p>9/15</p>	<p>In class: Be prepared to present your intro presentation to the class and/or to your working group. Bring slides.</p> <p>Bring ideas for study design for your topic (bring ideas for at least 2-3 studies). <b>Clearly</b> connect these ideas to the literature that you've read. Identify areas that you still need to research.</p> <p><b>Meet with working group prior to next class to create a well-developed study design</b></p>
<p>9/18</p>	<p><b>Assigned Reading: Chapter 6 "Writing Effectively about Design"</b></p> <p><i>Due by class time: study design with possible questionnaires</i></p> <p>In class: Discuss reading, Qualtrics tutorial</p> <p>Present design to the class/group for critique</p> <p><i>Methods slides due on Moodle by 11:59pm on 9/20.</i></p>
<p>9/22</p>	<p>Present Methods presentation to class or working group.</p> <p>Begin working on IRB form.</p> <p><b>Meet with your group outside of class to continue to refine your presentation and design. Work on IRB form.</b> Check with Beth/Rachael about whether you should be completing the full or expedited form.</p>
<p>9/25</p>	<p>Bring materials to class for piloting</p> <p>Bring completed (as much as possible) IRB form for peer review</p> <p><i>IRB Forms due on Moodle by 11:59pm</i></p> <p><i>*IRBs are not completed until all materials are in their final form (Qualtrics completed, procedure pinned down, etc.)</i></p>
<p>9/29</p>	<p>In class: Work on IRB form; work on Qualtrics/procedure; meet with Rachael/Beth</p> <p><i>IRB Form final draft due on Moodle by 11:59pm</i></p>
<p>10/2</p>	<p>Bring Intro/Methods draft to class for peer review</p> <p><i>Intro/Methods draft due on Moodle by 11:59pm</i></p>
<p>10/6</p>	<p>Practice Intro/Method slides in groups;</p> <p>Create calendar for completing senior project</p> <p><i>Exemption Forms (if applicable) due by 11:59pm</i></p>

10/9	<p>In class: Brainstorm about data collection – staying organized, creating a schedule, etc.          Create SPSS databases for data entry          Discuss any required or suggested changes to protocols, based on feedback from IRB  <i>Rachael gone for conference</i></p>
10/13	<p>Independent (or working group) work;          meeting with Rachael or Beth          Start running subjects this week, if IRB is approved</p>
10/16	<i>No Class, Mid-Semester Break</i>
10/20	<p>Bring polished draft of intro/methods slides to class.          Practice in front of class or working group.  <i>Intro/Methods slides due to Moodle by 11:59pm</i></p>
10/23	<p>Independent work; meeting with Rachael or Beth  <i>2nd draft Intro/Methods due to Moodle by 11:59pm</i></p>
10/27	<p><b>Assigned Reading: Chapter 8          “Results That Get Results”</b>          In class: What makes a good results section?</p>
10/30	<p><b>Assigned Reading: “What Test Should I Use”</b>          (Under “Statistical Resources”)          In class: identify the statistical tests you’ll need for your analyses. Don’t forget about descriptive statistics (average age, etc.)</p>
11/3	<p>Data entry &amp; analyses  <b>Be able to articulate the “so what” of your study for the next class.</b></p>
11/6	<p><b>Assigned Reading: Chapter 9 (“What Does It All Mean?”) and Chapter 10 (“Citations &amp; References”)</b>          In class: What’s the “so what?” of your project?  <i>Submit on Moodle by class time.</i>          Be prepared to discuss your results, but more importantly, to discuss why anyone should care.  <i>Results/Discussion slides due to Moodle by 11:59pm</i>  <b>Last Day to Drop Class Without Penalty</b></p>

11/10	In class: Practice Results/Discussion slides in working groups
11/13	Bring full paper draft to class for peer review. Print (or bring your computer) Chapter 14 "Article Writing 101". As you read through drafts, indicate which "tips" the author did properly and which tips need more focus. (Not all 50 will be relevant.) <i>Results/Discussion due to Moodle by 11:59pm</i>
11/17	In class: Practice Talks & Critique On the day of your practice talk, bring a typed copy of at least 10 questions you think an audience member might ask you.
11/20	In class: Practice Talks & Critique On the day of your practice talk, bring a typed copy of at least 10 questions you think an audience member might ask you. <i>Full draft of paper due to Moodle by 11:59pm</i>
11/24, 11/27	<i>No Class, Thanksgiving Break</i>
12/1	Practice Talks & Critique On the day of your practice talk, bring a typed copy of at least 10 questions you think an audience member might ask you.
12/4	Practice Talks & Critique On the day of your practice talk, bring a typed copy of at least 10 questions you think an audience member might ask you. <i>Final Presentation Slides (that you will be presenting) due on Moodle by 12/6, 11:59 pm.</i>
12/8	<b>Presentations to Department &amp; Guests!</b>
12/9 (Wednesday, noon)	<b>Presentations to Department &amp; Guests!</b> <i>Although not during our regular class time, all students are expected to attend. Please plan ahead and request a shift change if you normally work at a job during this time.</i>

12/11	<p><b>Presentations to Department &amp; Guests!</b>  <i>Papers Due to Rachael or Beth (via Moodle)</i>  &amp; to 2<sup>nd</sup> Reader by 11:59pm</p>
12/15 (Tuesday, 10 am)	<p><b>Presentations to Department &amp; Guests!</b>  <i>Although not during our regular class time, all students are expected to attend. Please plan ahead and request a shift change if you normally work at a job during this time.</i></p>
12/16 (Wednesday, 2 pm)	<p><b>Presentations to Department &amp; Guests!</b>  <i>This is during our exam time, so all students should be free &amp; are expected to attend.</i></p>