Research Methods in Psychology

 Instructor: David Polson, PhD
 Email: dpolson@uvic.ca  Office / Hours: COR A214 / TBA  Phone: 721-7525 (leave message)

Course Website: Accessible through CourseSpaces.

Lecture Room / Day, Time:  COR B112 / MR, 11:30-12:50

Teaching Assistant: Katrina Barber <kbarber@uvic.ca>

Lab Sections / Day, Time:  B05: T, 8:30-9:20;  B06: T, 9:30-10:20;  B07: W, 8:30-9:20;  B08: W, 9:30-10:20

Lab Instructor: Hannah van Mook <hvanmook@uvic.ca>

Course Content

This course deals with psychology as a science. You will be introduced to basic research techniques, with an emphasis on their conceptual rather than statistical rationale. You will be taken through all the stages of psychological research, from choosing the problem to publishing the results. Along the way you will be exposed to a wide variety of interesting topics in the psychological literature. I hope to convey to you the idea that designing and conducting research is an exercise in problem solving that can be exciting and creative.

Course Materials


(2) Study Guide (available at course website)

(3) THINK FAST computer program (optional; available at course website)

Course Overview

On “lecture” days, I will focus on addressing the answers to selected study questions from the required reading (see Study Questions section), often supplementing the textbook discussion with my own examples and perspective. Marks will be assigned for attendance and participation (see In-Class Exercises section). On “test” days, an optional THINKFAST bonus assignment is due before class (see THINKFAST section); you will have the full class time to write the test (see Test section).

On “lab” days (Tuesdays or Wednesdays), you will meet with your lab instructor (Hannah) for 50 minutes at an assigned time and place (see Laboratory section). There will be a separate outline for the lab component of this course detailing planned activities and when lab assignments are due. While there are four lab sections (B05 and B06 and B07 and B08), you must attend only the section for which you are registered.

Course Components

Study Guide. The Study Guide lists study questions for each chapter in this course. The study questions are important because they are the main focus of the lectures, and thus many of the test items are based on them. As a means of preparing for both the lectures and the tests, I encourage you to write out the answers to the study questions. Be sure to use them to direct your reading of the textbook. The Study Guide also includes other sources of course-specific valuable information.

Pre-Class Chapter Quizzes. On “lecture” days, a certain chapter from the textbook is assigned as required reading. At least 30 minutes prior to class you are required to complete an online quiz corresponding to that chapter, accessible from the course website. The answers to each quiz become available once its deadline expires. There are 11 chapter quizzes, each one consisting of 10 multiple choice items with a 30-minute time limit. The lowest of the 11 scores will be dropped. Overall, this component counts 80 points toward your final grade.

In-Class Exercises. Attendance and participation is required on lecture days. Importantly, you will be submitting some type of written work at the end of most lectures, for credit. The work will vary, including writing in-class quizzes about lecture and
video content, plotting and analyzing data, etc. The protocol is informal in that comparing your answers with other students is fine, even encouraged. Regardless of the format, a score will be assigned out of 10, partly based on your attendance and partly based on the written work you submit. Overall, this component counts 60 points toward your final grade.

**Tests.** There are three tests, one for every two units. Tests will consist of both multiple choice and open-ended items. Overall, tests count for 570 points toward your final grade. There is also an optional fourth test, scheduled on the last day of class. You might consider this option if you did poorly on one of the earlier tests. Most of Test 4 will consist of a sampling of questions from previous tests. More details will be provided later. Your score on Test 4 will substitute for your lowest test score; if it is your lowest test score, it will not count.

**Homework Assignments.** There are two out-of-class assignments, the deadlines for which are specified in the Class Schedule. Instructions for each assignment are provided at the course website. Each assignment is worth 20 points, so overall this component counts for 40 points toward your final grade.

**Laboratory.** The labs are designed to give you an opportunity to apply some of the concepts covered in lectures. Various activities are scheduled. For most labs, you will earn points for attending, participating, and submitting small assignments (75 points). In groups, you will design and conduct both an observational and survey study, and present a poster based on your work (50 points). Individually, over a five-plus week span, you will conduct a self-research study. You will be required to upload your self-data on a weekly basis to the course website (25 points), and submit a report based on your self-research study (100 points). Guidelines will be provided.

**Research Participation Bonus.** Up to 30 bonus points of extra credit can be earned by participating in research projects posted on the Psychology Research Participation System website (http://uvic.sona-systems.com) (excluding projects restricted to PSYC 100 students). You will earn 5 bonus points for each 30 minutes (or portion thereof) of participation if you have the researcher complete and sign the top portion of the PSYC 201 Research Participation Form and you complete the lower portion and turn it in to me no later than April 3. To earn all 30 bonus points, you must participate in at least two different studies (i.e., a single 3-hour study is not acceptable). There is no penalty for not earning extra credit. The rationale for the extra credit policy is that participating gives you hands-on experience in psychological research, completing the form requires you to practice conceptual and writing skills relevant to this course, and participating gives you contact with upper-level students engaged in research. If you sign up to participate in a study, you MUST keep the appointment and be on time, and you MUST take with you a copy of the PSYC 201 Bonus Research Participation Form (available on the course website).

**THINK FAST Bonus.** In order to think critically about research methods in psychology, you need to be fluent with the basic facts and concepts. THINK FAST is a computerized flashcard program designed to help you in this regard. It includes six decks of cards, one deck per unit. Deck size varies from about 20 to 40 cards. In THINK FAST, after you select a deck, a session begins: the program presents the cards one at a time and gives you two minutes to provide the answers to as many cards as possible. While there are several response options for learning the cards, you should work only in the Type Keyword mode. In this mode, flashcards are presented that are missing either the answer or a keyword or phrase, and you are required to type in the missing word(s).

For each unit deck, you can earn 5 bonus points if you achieve at least 5 sessions of mastery. The mastery criterion is at least 5 correct responses per minute with less than one incorrect response per minute. The due dates for meeting the requirements for each deck are listed on pages 4-5. Because there are six decks, you can earn up to 30 bonus points.

THINK FAST keeps a record of your scores on the disk. To be graded, you must upload a specified file to the appropriate link at the course website at least 30 min prior to the start of class on the day it is due. More detailed information about THINK FAST, including how to submit your work, see the document called “Using THINK FAST”, is available at the course website.

Research indicates that, relative to students who are traditionally taught, students who are exposed to Precision Teaching—with an emphasis on developing fluency (high rate correct) with basic terms and facts—write more succinct and accurate essays (even though they are not specifically trained to do so), participate in more class discussions, and have better concentration and long-term retention. Students in my classes have reported that developing fluency also helped them better understand the course readings. Thus, working with THINK FAST should have positive benefits for you beyond merely memorizing the definitions. It is worth using even if you are unable to achieve mastery for bonus points.

**The maximum total bonus points that can be earned (research participation plus THINK FAST combined) is 40.**
### Evaluation

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Pre-Class Chapter Quizzes (best 10 of 11)</td>
<td>80</td>
</tr>
<tr>
<td>In-Class Exercises</td>
<td>60</td>
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<tr>
<td>Tests (3)</td>
<td>570</td>
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<tr>
<td>Homework Assignments (2)</td>
<td>40</td>
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<tr>
<td>Lab Assignments (9)</td>
<td>75</td>
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<tr>
<td>Poster</td>
<td>50</td>
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<tr>
<td>Self-Research Submissions (5)</td>
<td>25</td>
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<tr>
<td>Self-Research Report</td>
<td>100</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1000</strong></td>
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<tr>
<td>Bonus up to...</td>
<td><strong>40</strong></td>
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### N grades

Students who have completed the following elements will be considered to have completed the course and will be assigned a final grade:

- 2 or more tests attempted
- 3 or more lab assignments submitted
- Research report submitted

Failure to complete one or more of these elements will result in a grade of “N” regardless of the cumulative percentage on other elements of the course. An N is a failing grade, and it factors into a student’s GPA as zero. The maximum percentage that can accompany an N on a student’s transcript is 49.

### Notes

- The multiple choice section of your tests will not be returned to you, but you can review it with me during my office hours. The essay section of your test will be returned to you.
- Your scores will be frequently updated on the course website. You should check them regularly to ensure that they have been recorded correctly.
- Final grades that end with a decimal point of 0.5 or above will be rounded to the next higher whole number, and grades that end with a decimal point below 0.5 will be rounded to the next lower whole number. For example, if a final percentage grade is 89.5 – 89.9, the grade will be rounded to 90. The rounding criteria will only be used on the final assignment of the letter grade.
- Assignments are due, and tests must be taken, on the date indicated in the Class Schedule. It is not fair for some students to do work later than others, unless there is a valid excuse. Therefore, except in cases meeting the criteria for an academic concession (see below), there will be zero credit and no make-up for any assignments or quizzes not turned in on time. **Travel plans will not be accepted as an excuse.**
- Students who do not complete requirements on schedule due to extenuating circumstances (i.e., personal illness or accident, family affliction, official university activities) must contact me immediately upon their return to make arrangements for substitute work. Late contact (e.g., after the tentative final grades are posted) is unacceptable. Typically, I will require documentation of the circumstance.
CLASS SCHEDULE

Jan 5 (R)  Introduction to course format

Jan 9 (M)  **UNIT 1: Psychology & Science; Variables**
*Required reading:* White & McBurney (2013), Chapter 1
- Online: Chapter 1 Pre-Class Quiz
- Possible In-Class Exercise

Jan 12 (R)  **Required reading:** White & McBurney (2013), Chapters 1, 5
- Online: Chapter 5 Pre-Class Quiz
- Possible In-Class Exercise

Jan 16 (M)  **Required reading:** White & McBurney (2013), Chapter 5
- Possible In-Class Exercise

Jan 19 (R)  **UNIT 2: Validity; Control; Ethics in Research**
*Required reading:* White & McBurney (2013), Chapter 6
- Online: Chapter 6 Pre-Class Quiz
- Possible In-Class Exercise

Jan 23 (M)  **Required reading:** White & McBurney (2013), Chapters 6, 7
- Online: Chapter 7 Pre-Class Quiz
- Possible In-Class Exercise

Jan 26 (R)  **Required reading:** White & McBurney (2013), Chapters 7, 3
- Homework Assignment 1 due (TCPS II Tutorial completed)
- Possible In-Class Exercise

Jan 30 (M)  ★ **Test 1**
- THINK FAST: Unit 1 and Unit 2 Bonus Assignment due

Feb 2 (R)  **UNIT 3: Description of Data; Inferential Statistics**
*Required reading:* White & McBurney (2013), Chapter 14
- Online: Chapter 14 Pre-Class Quiz
- Possible In-Class Exercise

Feb 6 (M)  **Required reading:** White & McBurney (2013), Chapters 14, 15
- Possible In-Class Exercise

Feb 9 (R)  **Required reading:** White & McBurney (2013), Chapter 15
- Possible In-Class Exercise

Feb 13-17  **READING BREAK**

Feb 20 (M)  **Self-Research Preview**
*Required reading:* White & McBurney (2013), Chapter 15
- Possible In-Class Exercise
Feb 23 (R)  
**UNIT 4: Nonexperimental Research**  
Required reading: White & McBurney (2013), Chapter 8  
- Online: Chapter 8 Pre-Class Quiz  
- Possible In-Class Exercise  

Feb 27 (M)  
Required reading: White & McBurney (2013), Chapter 9  
- Online: Chapter 9 Pre-Class Quiz  
- Possible In-Class Exercise  

Mar 2 (R)  
★ Test 2  
- *THINK FAST:* Unit 3 and Unit 4 Bonus Assignment due  

Mar 6 (M)  
**UNIT 5: True Experiments**  
Required reading: White & McBurney (2013), Chapter 10  
- Online: Chapter 10 Pre-Class Quiz  
- Possible In-Class Exercise  

Mar 9 (R)  
Required reading: White & McBurney (2013), Chapters 10, 11  
- Online: Chapter 11 Pre-Class Quiz  
- Possible In-Class Exercise  

Mar 13 (M)  
Required reading: White & McBurney (2013), Chapter 11  
- Homework Assignment 2 due (Statistics Exercise completed)  
- Possible In-Class Exercise  

Mar 16 (R)  
**UNIT 6: Single-Participant Experiments; Quasi Experiments**  
Required reading: White & McBurney (2013), Chapter 12  
- Online: Chapter 12 Pre-Class Quiz  
- Possible In-Class Exercise  

Mar 20 (M)  
Required reading: White & McBurney (2013), Chapter 12, 13  
- Online: Chapter 13 Pre-Class Quiz  
- Possible In-Class Exercise  

Mar 23 (R)  
Required reading: White & McBurney (2013), Chapters 13  
- Possible In-Class Exercise  

Mar 27 (M)  
★ Test 3  
- *THINK FAST:* Unit 5 and Unit 6 Bonus Assignment due  

Mar 30 (R)  
**Self-Research Project Review**  
- Possible In-Class Exercise  

Apr 3 (M)  
★ Test 4 (optional)