

Course Materials

- All course and laboratory materials are available from the class website.

Introduction to the Course

In Psychology 350 you will learn about two important skill sets: 1) the ability to design, complete, interpret, and report empirical research to test hypotheses derived from Psychological theory or its application, and 2) the ability to critically evaluate research produced by others and to propose changes in the design, analysis, or interpretation of it.

You might not be planning a career as a research psychologist, and many professional psychologists do not themselves contribute to the research literature. However, all psychologists must be competent "consumers" of the psychological research literature in their area of expertise, whether it is clinical, counseling, consulting, educational, law-psych, I/O, human resources, human factors, or some other area of psychology.

Also, most jobs held by professional psychologists require a substantial amount of data analytic skill and report writing ability, whether it is to document decision making, obtain funding, to provide evidence for the efficacy of service delivery, or to contribute to the professional literature.

In addition, the ability to produce competent, theoretically relevant empirical research is usually the "ticket for admission" to a career as a professional psychologist. Completion and presentation of your own independent research (say, an Honors Thesis or presentation/poster at a student research conference) is often helpful evidence that you can "do research" when applying to graduate school. Most Ph.D. programs require at least two empirical research projects -- the Master's thesis and the Ph.D. dissertation.

Identifying You

You are much more than just a number! However, there are two "numbers" that will be used to identify you at in this class. They are your UNL ID#, the 8-digit number that is on your UNL ID card, and your Blackboard login. You are not to use your Social Security Number at any time to identify yourself in this class or the laboratory! Any time you are asked for "a number" you must use your 8-digit UNL ID# or your Blackboard login. For example, you will use one of these as your password for the on-line grade book.

While we're on the subject... Remember that there are around 120 of you, only one of me, and I have a lousy memory. Help me out, please?!? Wave to me if you see me on or off campus; if you have a moment, walk up and introduce yourself (several times). Do something in or out of class that I'll remember (keep it legal, ethical & polite)!!! Drop by office hours, even if you have nothing in particular that you need.

A Moment of Honesty

What you will learn in this course is the "common sense of the discipline of Psychology". Everybody who engages in psychology – theoretical or applied, academic or professional, uses these principles and processes every day. And everything else that you learn while getting your major is based on these principles and procedures! I think that understanding how psychologists acquire "new knowledge" and how they evaluate "new procedures" is the coolest thing there is and the most important part of a Psyc major's education. I will try desperately to infuse this enthusiasm and passion into your soul during the semester. No matter what you have planned for your future, or how much those plans change, a practicable knowledge of this material and these skills will increase your chances for success – I really believe that! Here we go!!!

Specific Course Goals

By the completion of this course you should be able to:

1. Critique (i.e., identify and evaluate the components of) a summary of a research project, including: the purpose and research hypotheses, the sampling and subject assignment procedures, IV manipulation and DV measurement procedures, confound control, and the statistical analyses & their interpretations.
2. Generate original and meaningful research, including the details of: purpose, hypothesis, research methodology, data collection and statistical analysis procedures.
3. Complete data collection and collation procedures based upon the operational definitions of a research design.
4. Select and perform the appropriate statistical analyses based upon either the explicit research hypotheses and/or the questions and comparisons implicit in the research design and variable set.
5. Employ a computer statistical package to perform analyses of experimental data, including how and when to augment that package with hand-calculated statistical analyses.
6. Communicate the purpose, hypotheses, procedures, data, analysis results and interpretations of a research project using the conventional written format and style (i.e., APA-style papers).
7. Use a computer word processing package to prepare manuscripts and other written products.

Sections of the Course

The expected sections of the course (things could change) are:

1. Research Hypotheses, Validity & Research Designs
2. Basic Data Analysis
3. Advanced Research Designs and Data Analysis

Course Grade

Your course grade will be based upon: **four unit scores (50% - 12% each for Unit 1, 2 Exams & 12% for Unit 3 Assignments, & 14% for Unit 4 Exam), online assignments (5% - average of "Green Things" & "Pink Things"), laboratory assignments (In-Laboratory & Take-Home, 15%), laboratory research project (literature review, research proposal, reports, poster & presentation, 25%), & laboratory final exam (5%)**. Attendance and participation in lecture and laboratory will be noted and used in the assignment of the final grades, especially decisions about "borderline" grades.

Letter grades generally will be assigned using the usual decades: "A" = 100-90%, "B" = 89-80%, "C" = 79-70%, "D" = 69-60%, "F" = <60%. "Plus" grades generally will be given for %s in the 77-79 range of each decade and "minus" grades generally will be given for %s in the 70-71 range. For example, 93% = A, 91% = A-, 86% = B and 87% = B+.

Please note: You cannot receive a passing grade in the class unless you complete all of the take-home laboratory assignments, the laboratory research project, both the lecture and laboratory final exams, and the research participation requirement.

Please note: A "C" is the minimum grade for this course to count toward a Psychology major (a "C-" will not count and the course will have to be retaken).

Please note: Consideration of "Withdraw" and "Incomplete" grades will be according to the guidelines provided in the *Undergraduate Bulletin* and the *Schedule of Classes*

How Psyc350 fits into ACE

Outcome(s)

SLO10: Generate a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation, and reflection.

Research Paper: Students will submit a major research paper in which they introduce the topic by connecting their research to reports that have been published in the scientific literature, describe the research methods, report the results including appropriate statistical analyses, and discuss the implications of the findings in light of other research on that topic. \

Poster: Students will construct a poster in the format typically used in scientific conferences. The research that appeared in the research paper will be "packaged" in the very different format required for poster presentations.

Reinforcements

Writing

Writing will be reinforced by means of several reports submitted as required projects in the laboratory, and by the final research paper.

Mathematics and Statistics

Mathematics and Statistics will be reinforced throughout the semester as students learn to identify appropriate statistical tests to be used in particular research situations. Students will learn some of the mathematical groundwork for statistical tests, but more importantly they will learn the pros and cons of various tests and whether their assumptions are met in certain applications. Students will learn to compute statistical tests using common statistical software packages, and how to interpret the results.

Critical Thinking

Critical thinking will be reinforced by means of reading research reports to identify the authors' research designs, evaluate the validity of their measurements, and critique the appropriateness of their conclusions in light of the data.

Hour Exam Re-takes, Make-ups and On-Line Examinations

All lecture examinations will be taken on-line using the Maple TA system that is embedded in Blackboard, in the Testing Center in 227 Burnett Hall. You will need to bring your UNL ID with you; they really will send you away if you don't have your card. When the Testing Center is open changes across days and sometimes across times of the semester, so be sure to double check when you are planning your schedule. They close the doors promptly at the scheduled closing time, but will usually allow students who are seated at closing time an additional 15-20 minutes to complete their exams before cheerfully tossing you out the door.

Any hour examination taken at the scheduled time may be "re-taken" one time and the better score of the two will count towards your final grade. There will be no exam "make-ups". If you miss an exam, your score will be 0% and you may re-take the exam. This means that if you miss an examination date you will have only one chance to complete that exam (the re-take). Thus, you are NOT encouraged to procrastinate and take only the re-take.

All examinations are taken on-line using the Testing Center in Burnett Hall. Elaborate, redundant systems are used to administer, monitor, and record your work. Not lost a single exam has been lost during the years I've used these systems. However, students occasionally delete their own work, usually by not following instructions carefully. If an exam you are certain you've taken can not be found, you will be required to re-take that exam.

Lecture Homework

There will be lots of homework during this class. Specifically, the homework is designed to make me more useful to you! The various kinds of homework give you an opportunity to "try out" the material and procedures and to assess your understanding of

them. Then, you can ask about specific things that you don't understand in a timely fashion, either in class or by coming to office hours. The idea is to not wait until right before (or worse yet, right after) the exam to discover what you do and don't understand!

The majority of these activities are conducted on-line providing you immediate feedback as well as a way to repeat the activities to improve your understanding of the material. There are three types of Maple TA (MTA) assignments: 1) *MTA Prelude Exercises* are designed to familiarize you with some of the terms and concepts that will be central in the upcoming lecture – these exercises should be completed before the lecture during which that topic is presented, 2) *MTA Homework Assignments* are designed to give you practice with concepts, techniques and procedures covered in the lecture – these exercises should be completed before the lecture after which that topic is presented, and 3) *MTA Terms Assignments* are designed to give you practice with key vocabulary covered in the lecture -- these exercises should be completed before the lecture after which that topic is presented. Because of the cumulative nature of this course (each topic is a building block for topics that follow), timely completion of the activities is important and will be richly rewarded. The grading system for the homeworks is designed to motivate you to keep up. Our research over the past eight years has clearly demonstrated that those who complete and perform well on homeworks get better exam grades, better laboratory assignment grades, and, consequently, better grades in the course.

Each *Prelude Exercise, Homework Assignment, and Terms Assignment* is worth 10 points. The best thing is to finish the exercise before the next class. Each class usually builds upon previous classes, so the better you know the earlier material the more the lectures that build on them will help you. If you finish the exercise before the next class you will get 10 points. If you finish the exercise before the exam you will get 5 points. If you don't do the exercise before the exam you will get -10 points. It is a good idea to redo any exercise on which you do poorly, especially as you are preparing for the exam.

Please note: If you have difficulty with any assignment -- whether conceptual or with the on-line systems -- you should contact me (email is best because it automatically times and dates your correspondence), but you should be willing to call me at home if you're stuck (486-4556). Depending upon the nature of the difficulty, the "due date" for an assignment may be adjusted, but only if you contact me before that assignment is due.

Attendance: Yours -- You are responsible for all of the information, materials, assignments, due dates, etc. that are presented in class meetings, laboratory meetings, or on the class & laboratory web pages, including any changes that are made. Attendance is not required, but I think I put on a pretty good show and that the lectures will help you perform better on examinations and in the laboratory. Some absences are unavoidable, and I will help you to "recapture" missed material (usually by suggesting reading you should do or encouraging you to get notes and other information from other students). If an absence can be anticipated, I can often be of greater help. **Mine** – because of various commitments (typically, attending professional conferences), I may be gone. When this happens the substitute will usually be one of the graduate students who is particularly skilled with this material.

Academic Honesty: The consequences for cheating on any examination or quiz, or any plagiarism (e.g., the use of unreferenced material in any laboratory writing assignment) will be: 1) failure in the course, and 2) referral of the matter to the office of Student Life for possible action by the Judicial Board as provided for in the UNL Student Handbook.

The issue of academic dishonesty for homework and laboratory assignments is somewhat less clear, and requires more of an explanation. The purpose of the homework and many of the laboratory assignments is to give you a chance to practice various skills (reading, interpreting, computing, writing). Thus, it makes good sense for you to work together with other members of your class. **However, the final product you submit must be your own work and in your own words.**

An example or two should help: You are strongly encouraged to get together with your classmates to determine the components of a good definition for the terms which are part of the first several homework assignments. However, when you write your answers on the homework sheets, put them in your own words, and use your own examples. Similarly, you will probably find it useful to get together and discuss how to best incorporate the information from a set of laboratory readings into the Introduction of an assigned paper, and you are encouraged to do so. However, when you write that introduction do your own writing.

If there is evidence of dishonesty on any homework or laboratory assignment (including exact or very similar phrasing, order of topics, examples, computational examples, patterns of mistakes, etc.) your TA and I will decide whether to address the dishonesty by giving you the opportunity to re-do the homework assignment or to fail you in the course and/or refer of the matter to the office of Student Life for possible action by the Judicial Board as provided for in the UNL Student Handbook.

Course Workload and Suggestions

Little of the material in this course is difficult, but the difficulty of the course comes from the sheer amount of material and the need to remember and apply large portions of it at any one time. For some of you, this will be the last formal presentation of this information you ever receive. For others, this is your best opportunity to prepare yourself for the rigorous and demanding training you will receive in graduate school. With these things in mind ...

- **You should expect to "do something" for each class and laboratory meeting.** It may be reading, homework, preparing for exam reviews, etc. Sometimes this will require only two or three hours, sometimes more.
- While the "mastery system" (re-takes and re-writes to improve your grade) allows you to re-do exams and assignments, time will be a limiting factor. You should try to get it right the first time, and only rely upon "do overs" when your best efforts are insufficient. Don't hope that an unprepared "do-over" guarantees an improved score.
- I suggest that you do not take this course as part of a "really busy semester". While I realize that you have other classes and other commitments beyond schoolwork (i.e., "a life"), a considerable commitment of time and energy will be required to take full advantage of the learning opportunity provided by this course and get the A to prove it.
- **Plan to make this course "part of your life" for the next few months!** Think about the material daily. Figure out ways to apply the skills you are learning to any research you are doing, any other classes you may be taking, and everyday life. The skills used to plan and/or evaluate a psychology experiment are the same ones used to consider any evidence-based claim (for example, when you learn to apply these principles, you'll never think about arguments or TV commercials the same way again!!)
- Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.