

**Office hours Mon, Wed & Fri 12:30-1:20 in 230 Burnett Hall**

**About masks in lab:** Students in this Laboratory must work in close physical proximity to one another for extended periods of time in order to achieve the academic goals of the course. For this reason, the Department of Psychology and the College of Arts and Sciences have determined that face coverings will be required in the lab meetings. If you are unwilling to comply with this requirement, please visit with your advisor about possible alternative courses that you might take in lieu of this one.

**Course Materials**

- There are no required textbooks, workbooks, APA manual, etc
- All course materials are available on-line at [psych.unl.edu/psycrs](http://psych.unl.edu/psycrs)
- You will be required to purchase a copy of SPSS: Standard Grad Pack, or make sure you have sufficient access to the package to complete your Laboratory Homework assignments completely and on time (don't worry about SPSS until the second portion of the course and lab – we'll strategize about it together then)

**Objectives & Strategies:** 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.

**Classroom Climate:** We have to be able to talk forthrightly about the topics of this class. And to explore the history, current, and likely future approaches of our trade! Some obvious sensitive topics are the variables & labels we use to define our target populations and describe who is in our samples. In particular we have to be sure we are aware of the standards and preferences in our own research/application communities, as well as differences across communities. Our class will welcome students from multiple colleges and programs, not all of whom use either the same "descriptive categories" nor the same "labels" for those categories. And there will be several other sensitive parts (e.g., researcher motivations & bias). So, we gotta find, as a group, a balance between "comfort & coverage". Be sure to let me know when we're bumping up against one of the other! Here's a thoughtful bit offered by the Chair of Psych, "The pandemic and our current political polarization mean that stress is high for everyone. We obviously can't change that but showing empathy and compassion for each other can help. Listen to one another, be aware of other people's needs, and cut each other slack."

Everyone who attends this class is entitled to feel welcome and to feel safe from intimidation, insult, bullying, harassment, or discrimination of ANY sort and safe from unwelcome sexual contact or advances. We will consistently treat each other with respect and support. Both agreement and disagreement drive learning, understanding and successful application, and both are best done with mutual respect, patience and occasionally grace.

**Emphasis:** With respect to design issues, we will pay special attention to the "rules of evidence" for the quantitative analysis of cause-and-effect relationships and the important differences between experimental, quasi-experimental, and nonexperimental designs. With respect to data analytic issues, we will particularly pay attention the family of

ordinary least-squares techniques that includes analysis of variance and linear regression. We will emphasize the pragmatics of hypothesis testing, data analysis and the communication of findings, at a level that is more like “driver’s education” and less like “mechanical engineering.”

As data collectors and data analysts, we have a particular obligation to avoid treating the data and results from our samples as “representing everybody”. In particular, we need to avoid generalizing results from majority-dominated samples as if they were “universal” or “sufficient”. We must always ask, “From whom were the data sampled.” In fact, we will expand the usual meaning of “sampling” to include not only “who?” but also “where, when, and how?”

### **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 Canvas 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 Canvas 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 170 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 Psychology 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, and 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 research design.
4. Select and perform the appropriate statistical analyses based upon 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).

### **Sections of the Course**

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

1. Research Hypotheses, Validity & Research Designs
2. Basic Bivariate Data Analysis
3. Cooler Research Designs & Data Analysis
4. Multivariate Research Designs and Data Analysis

## Course Grade

Your course grade will be based upon: three unit Exam scores (48% - 12% each for four Exams) online assignments (12% - average of "Green Things" & "Pink Things"), laboratory assignments (In-Laboratory & Take-Home, 20%), laboratory research project (literature review, research reports, poster & presentation, 20%).

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 ?7-?9 range of each decade and "minus" grades generally will be given for %s in the ?0-?1 range. For example, 93% = A, 91% = A-, 86% = B and 87% = B+.

**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:** You cannot receive a passing grade in the class unless you complete all of the take-home laboratory assignments, both the lecture and laboratory final exams, and the 12- credit research participation requirement.

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**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.

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

All lecture examinations will be taken on-line using the Mobius system that is embedded in Canvas. For testing in the DLC 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.

Any examination taken during the scheduled interval 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.

Elaborate, redundant systems are used to administer, monitor, and record your work. Not 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 as soon as possible after the lecture about 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 after that topic is presented.

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. Our research over the past eighteen 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.

**Please note:** If you have questions about "lab stuff" you should contact your lab TA. Since they will be grading your work, their opinion is the most important! If you have difficulty with any assignment associated with the lecture or exams – 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 (402 486-4556). All my kids are away at college or grad school, so polite & purposeful inquiries are welcome! Sometimes you'll ask for "timely" help and sometimes you will put things off, be busy with other things, or somehow get behind. You should ask for help even if you are woefully behind for no defensible reason! Here's the point... ask for help when you need help, as soon as you realize you need help and keep asking for help until things make sense and you are performing well!

**Attendance: Yours** – You are responsible for all of the information, materials, assignments, due dates, etc. that are presented in class meetings, laboratory meetings, on the class and laboratory web pages, or on Canvas, 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, audio files you should listen to, 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 and a bit of statistical consulting – where most of the stories come from!), I may be gone. When this happens the substitute will usually be one of the graduate students who is particularly skilled with the material being covered.

## Inclement Weather Policy

The UNL Inclement Weather policy can be found at: <https://bf.unl.edu/policies/inclement-weather>. If in-person classes are canceled, you will be notified of the instructional continuity plan for this class by Canvas notification and plans for proceeding with the course will be explained at that time.

## Extension Request Policy for Psyc350 Lecture

Please contact me if you would like to request an extension on any lecture assignment for reasons of health (yours or someone for whom you are responsible/helping) or because of religious or secular celebrations not captured in the UNL Academic Calendar. Ideally you will contact me well before the requested extension, but it won't always work like that, so don't let a late request stop you from making a request! It is important to me that you have the opportunity to learn the content and skills we address in this class, and that you have the further opportunity to have your assessments reflect that learning. Please contact your TA for requests related to laboratory assignments.

## 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 or professional 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 "proficiency 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. Associate the things we are talking about with things you are studying in other classes (e.g., where does the information you're studying in other classes "come from"?). 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!!)

**Academic Honesty:** The consequences for cheating on any examination or quiz, or any plagiarism (e.g., the use of unreferenced material or the substantial use of other's work) in any laboratory writing assignment) may 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, and 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.

## **Finally, here's the thing!**

**There is much we are supposed to accomplish in this course ! And barely enough time to do it well! And the current "troubles" don't make things easier!**

**If you need something, please ask. There are going to be office hours M-W-F in person in 230 Burnett, or by Zoom. And don't forget email -- [cgarbin@unl.edu](mailto:cgarbin@unl.edu) – please, not Canvas email or Notifications) Give me a shot at helping, please!**

**If you feel uncomfortable about something from the class, something I've said, another student has said, something we read, etc. please bring it up with me or in class, so we can talk it through, sort things out, apologize when necessary and continue as a learning community.**

**Things in your life will crop up to reduce & delay your time and efforts toward this class... Its gonna happen and we WILL find ways to work around whatever you encounter. Remember that less-than-timely requests for help are also very welcome! Sometimes we get behind and can waste huge amounts of time trying to "recover on our own" when a couple reminders or a couple questions answered from me will get you on your way so you are "spending time" not "wasting it"! Ask! Please!**

