PSYC 2444-001   **Research Design and Statistics II**   **Fall 2009**

Lecture:
Instructor: Dr. Daniel Levine
Classroom: LS 424 (Lecture)
Class hours: MW 2:30-3:50 PM

Contact information for Dr. Levine:
Email: levine@uta.edu
Office: LS 414
Office phone: 272-3598
Office hours: MW 12:00-1:00 PM and TTh 4:00-5:00 PM
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Lab Teaching Assistant: Jiwei He

Section:	002
Classroom:	LS 318
Class hours:	Thursday 5:30-7:20 PM
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Office:	LS 505
Office Hours	1:00-2:00 PM Thursday

Lab Teaching Assistant: Megan Uhelski

Section:	003
Classroom:	LS 318
Lab hours:	Friday 11:00AM-12:50 PM
Email address:	megan.uhelski@mavs.uta.edu
Office:	LS 506
Office Hours:	1:30-2:30 PM Tuesday

Lab: Two (2) lab sections are available. You must be registered in lecture (PSYC 2444-001 and a lab section (PSYC 2444-002, 003) concurrently. Please see the **lab schedule** for further information.

Required texts (bring texts to lecture and lab): (These texts are the same as those required previously for PSYC 2443. Retain these texts for PSYC 2444 and advanced electives.)

- Jackson, S. L. (2006). *Research methods and statistics: A critical thinking approach* (2nd edition). Belmont, CA: Thomson Wadsworth (ISBN: 0-495-28497-1)
- Kirkpatrick, L.A. and Feeney, B.C. (2007). *A simple guide to SPSS for Windows, Version 14.0*. Thompson Wadsworth. (ISBN: 0-495-31863-9)
- American Psychological Association (2001). *Publication Manual of the American Psychological Association* (5th edition). Washington, D.C.: APA. (ISBN: 1-557-98791-2)

Required journal articles: Articles will be available on electronic reserve through WebCT.

Recommended (optional) resources:

- Jackson, S. L. (2006). *Study guide for research methods and statistics* (2nd edition). Belmont, CA: Thomson Wadsworth (ISBN: 0-495-00338-7).
- Gelfand, H., Walker, C. J., & American Psychological Association (2002). *Mastering APA style: Student's workbook and training guide* (5th edition). Washington, D.C.: APA. (ISBN: 1-557-98891-9)
- www.apastyle.org
- Huff, D. (1982). *How to lie with statistics.* W. W. Norton & Co., New York, New York. (ISBN: 0-393-09426-X)
- Jones, G. E. (1995). *How to lie with charts.* SYBEX Inc., San Francisco, CA. (ISBN: 0-7821-1723-6)
- Siegal, A. M., and Connolly, W. G. The New York Times Manual of Style and Usage (1999). Three Rivers Press, New York (ISBN: 0-8129-6389-X)

Course description: PSYC 2444. RESEARCH DESIGN AND STATISTICS II (3-2) 4 hours credit. Theoretical and practical approaches to research methodology, statistical analyses and techniques of reporting research. **Prerequisite:** PSYC 2443.

Course goals: This course consists of learning a variety of methods and procedures commonly used to conduct psychological research, analyzing the data collected in such research, and communicating the research results to the scientific community. Specific goals as outlined in the **APA Assessment Cyberguide** are appended to this syllabus.

Assignments and exams:

Lecture: In-class exercises will be scheduled throughout the term. Three multiple choice (part 1) and short answer (part 2 word problems) exams (60-70 questions each for a total of 200 points) will be used to determine your performance in lecture. Exam questions will be drawn from required reading, lecture material and class activities. If you are tardy on the day of the exam you will not be permitted to take the exam if any class member has completed the exam and left the room. All make-up exams will be given during the last lecture week of the course. (See the **lecture schedule** for exam dates.)

Lab: Exercises, research papers, and other assignments will be scheduled throughout the term. Unless otherwise instructed, all assignments must be typewritten and in compliance with APA formatting. (See the **lab schedule** for further details.) The portfolio requirements are described in detail in the Portfolio section of the syllabus. If a portfolio is received after the due date you will receive an incomplete (grade of X) for the course. In PSYC 2444, portfolio end-of-the-semester reviews with your teaching assistant are required.

Attendance:

Lecture: Regular attendance is expected. Students will be required to sign in when they come to lecture. Attendance will be recorded: *10 points will be deducted from the lecture grade for the 5th unexcused absence and 2 points per lecture for unexcused absences beyond the 5th.* Absences that generally meet faculty standards include: severe illness; death in the immediate family; court appearances; and traffic delays that are unavoidable.

Absentees will not be provided with lecture notes, outlines or other materials from classes missed. No make up exam will be given unless documentation is received for a University-approved absence.

Lab: Lab attendance is *mandatory.* Students arriving more than 10 minutes late to lab will be counted as absent. *Five points will be deducted for each unexcused absence from lab.* The information you receive in the lab sections is necessary to aid you in writing papers and doing homework assignments. The information obtained will carry over from the first semester into the second semester. Lab attendance is crucial.

Make-up work: Make-up assignments and exams will be granted only for University-approved, documented absences.

Extra credit: Research Participation through SONA will grant up to 10 extra credit points for the lecture portion. Each hour of research participation equals 2.5 points for a maximum of 4 hours. (You may participate in additional research voluntarily.)

Tutoring: Tutoring is available for this course within the Department of Psychology. The tutor is Haylie Gomez and the location is LS 318. Hours for tutoring are:
> Monday 10:00 AM – 5:00 PM; Tuesday 11 AM – 12:30 PM, 2:00-3:30 PM

Grading: You will receive one course grade for your combined performance in the lecture and laboratory. A total of 400 points—200 from lecture and 200 from lab—reflect a perfect score or 100%. In **lecture,** you will have a chance to earn **200 points** on three objective/ short answer exams. (Note: while the short answer parts of the tests are given during labs, they are part of the *lecture* grade!) In **lab**, we will be using embedded assessment techniques throughout the course for 3 major evaluation projects:

Project 1: Manuscript (50 pts.)
Project 2: Proposal (50 pts.)
Project 3: Portfolio (20 pts.)

Be sure to check the schedule below for interim evaluation dates!
Five points/day (i.e. each 24-hour period) will be deducted from your final score for any project that is received late.

Students must receive a passing grade (a "C") in both lecture (139 points out of 200 possible points or 69.5%) and lab (139 points out of 200 possible points) to pass the course and become eligible to enroll in PSYC 2444. Any student earning a "D" (119-138 points out of 200) or "F" (0-118 points out of 200) in the lecture OR in the lab will receive a "D" or "F" as the final course grade. (Please note that the last day to withdraw from this course is March 30.) We will also examine your grades to determine if you have a statistical outlier in your performance and make adjustments to your final letter grade accordingly. Students who meet the minimum requirements of 139 points in BOTH lecture and lab will have their final course grades calculated by adding their lecture and lab points together and assigning final letter grades as follows:

Letter Grade	Percentage of Points	Points required
A	89.5-100.0%	358-400
B	79.5-89.4%	318-357
C	69.5-79.4%	278-317

From the UT Arlington Undergraduate Catalog: Student Grievance Procedures Related to Grades: In attempting to resolve any student grievances regarding grades, it is the student's obligation first to make a serious effort to resolve the matter with the individual with whom the grievance originated. Individual course instructors retain primary responsibility for assigning grades. The instructor's judgment is final unless compelling evidence shows discrimination, preferential treatment or procedural irregularities. For further information see: http://www.uta.edu/catalog/general/academicreg

Important dates:

September 09:	Census Date
October 14:	Mid-semester
October 30:	Last day to drop courses
November 26-29:	Thanksgiving vacation
December 4:	Last day of classes

Student Support Services:

- **Computers** in LS 318 are available for your use on weekdays 8 am-5 pm when classes are not being held in that room.
- **Library information** can be obtained through Helen Hough, Psychology Librarian. Please contact her by phone (817.272.7429) or by email (hough@uta.edu). You will find useful information for psychology at http://ww.uta.edu/library/research/rt-psyc.html
- **Other** services can be obtained from the University. The University supports a variety of student success programs to help you: learning assistance, developmental education, advising and mentoring, admission and transition, and information about federally funded programs. Students seeking assistance with academic, personal or social problems should contact the Office of Student Success Programs at 817.272.6107.

Drop for non-payment of tuition: If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar's Office. You may not continue to attend class until your Enrollment Loan has been applied to outstanding tuition fees.

Academic Integrity: It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation, reference to Public Law 93112—The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled, Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As required by law, we will provide reasonable accommodations to students with disabilities, so as not to discriminate on the basis of that disability. However, the student is responsible for informing faculty at the beginning of the semester of a disability requiring special accommodation and providing authorized documentation through designated administrative channels.

Bomb threats: If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations or tests caused by the bomb threat. Alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

E-Culture Policy. The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email. All students are assigned an email account and information about activating and using it is available at www.uta.edu/email. New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly. *In this course, please communicate with the instructor and teaching assistants by WebCt.*

Wk	Date	Lecture Topic	Instructor	Reading Assignments	Date:	Lab Exercises/Assignments	Assignment Due
1	M 8/24	Course overview Review of 2443 Exam 3			Th 8/27 F 8/28	Lab Overview Review APA format	
	W 8/26	Using the library	Hough			W1: 2443 Terminology Review	
2	M 8/31	Developing a design Design decisions T tests for one sample		Jackson Ch. 7 (review) and Ch. 8	Th 9/3 F 9/4	Between Groups Design / Single Sample T-Tests	W1: 2443 Terminology Review (10pts)
	W 9/2	Between groups designs Validity, control, and confounds		Jackson Ch. 8 pp. 175-177		W2: Problem Set	
3	M 9/7 is a holiday	T tests for 2 independent samples		Jackson Ch. 8 pp.178-186 Jackson Ch. 9 pp. 196-202	Th 9/10 F 9/11	Independent T-Tests Class Experiment	W2: Problem Set (10pts)
	W 9/9					W3: Problem Set	
4	M 9/14	Within groups designs Matched participants		Jackson Ch. 8 pp.186-190 Jackson Ch. 9 pp. 202-208 Jackson Ch. 8 pp. 191-193	Th 9/17 F 9/18	Dependent T-Tests	W3: Problem Set (10pts)
	W 9/16	T test for 2 dependent samples		Jackson Ch. 9 pp. 202-208		W4: Problem Set	
5	M 9/21	Review for Exam #1		Review Jackson Ch. 7, 8, and 9 and SPSS Ch. 8, 9	Th 9/24 F 9/25	Psychology department/ faculty web pages scavenger hunt	Portfolio review 1 W4: Problem Set (10pts)
	W 9/23	Exam #1 (MC part 1)				Exam #1 (WP part 2)	

Learning Objectives Module 1: At the end of this module, students should be able to:
   (1)   Explain between- and within-groups designs and compute the appropriate *t* statistic for each.
   (2)   Describe various types of confounds and the means for controlling or minimizing effects of confounds.
   (3)   Differentiate between experimenter effects and participant effects and how the design of experiments relates to these concepts.
   (4)   Explain and use random assignment; demonstrate use of a random number table
N.B. Learning objectives were adapted from Jackson, S. L. (2006). *Study guide for research methods and statistics* (2nd edition).

Wk	Date	Lecture Topic	Instructor	Reading Assignments	Date:	Lab Exercises/Assignments	Assignment Due

Wk	Date	Lecture Topic	Instructor	Reading Assignments	Date:	Lab Exercises/Assignments	Assignment Due
6	M 9/28	Mixed and complex designs		Jackson Ch. 10 pp. 211-219	Th 10/1 F 10/2	Writing the proposal Concept mapping	Quiz: Psychology department/ faculty web pages (10 pts.)
	W 9/30	ANOVA part I		Jackson Ch. 10 pp. 216-224 SPSS Ch. 10 and 12		W6: **Concept Map (due week 8)** **Proposal Draft 1 (due week 7)**	
7	M 10/5	ANOVA continued		Jackson Ch. 10 pp. 224-226 SPSS Ch. 11	Th 10/8 F 10/9	ANOVA	Proposal draft 1
	W 10/7	Factorial designs Understanding interactions		Jackson Ch. 11 pp. 241-248 SPSS Ch. 13		W7: Problem Set	
8	M 10/12	ANOVA part II Repeated measures		Jackson Ch. 10 pp. 229-236 Jackson Ch. 11 pp. 249-260	Th 10/15 F 10/16	ANOVA / Effect Size	W7: Problem Set (10 pts) Concept map (10 pts.) Complete surveys
	W 10/14	Effect size		Jackson Ch. 11 pp. 256-257		**Proposal draft 2 (due week 10)**	
9	M 10/19	Review for Exam # 2		Review Jackson Ch. 10, 11 And SPSS Ch. 10, 12, 13	Th 10/22 F 10/23	**Exam #2 (WP part 2)**	Portfolio review 2 Manuscript Draft 1
	W 10/21	**Exam # 2 (MC part 1)**				**Manuscript Final (due week 11)**	
10	M 10/26	Planned and post hoc comparisons		Jackson Ch. 10 pp. 226-228	Th 10/29 F 10/30	SPSS	Proposal draft 2
	W 10/28	Elements of proposal writing Quasi designs		See Jackson chapter on proposal writing Jackson Ch. 12 pp. 264-272			

Learning Objectives Module 2: At the end of this module, students should be able to:
  (1) Explain the costs and benefits of using designs with more than 2 levels of an independent variable.
  (2) Identify designs that use ANOVA, compute one-way randomized and repeated measures ANOVA and interpret results.
  (3) Describe effect size and compute and interpret Cohen's *d.*
Learning Objectives Module 3: At the end of this module, students should be able to:
  (1) Describe statistical techniques for planned and post hoc comparisons; compute Tukey's post hoc test and interpret results
  (2) Explain what quasi designs are and when and how they are used.
  (3) Review surveys and sampling methods; review case studies and their value for psychology.
  (4) Describe the career paths of those majoring in psychology and the occupational opportunities that will exist in the future.
  (5) Identify the elements of proposal writing and compare components to the manuscript.

Wk	Date	Lecture Topic	Instructor	Reading Assignments	Date:	Lab Exercises/Assignments	Assignment Due

11	M 11/2	Key experiments Analysis of quasi designs		Jackson Ch. 12 pp. 272-273	Th 11/5 F 11/6	Post hoc comparisons W11: Problem Set	Manuscript Final (50 pts)
	W 11/4	Surveys and sampling Analysis of survey designs		Review Jackson Ch. 4 pp. 74-85			
12	M 11/9	Surveys and sampling Key experiments		Jackson Ch. 4 pp. 74-85 Web CT Handout: Surveys and sampling	Th 11/12 F 11/13	Within subject design **Proposal Final (due week 13)**	W11: Problem Set (10pts)
	W 11/11	Case studies		Jackson Ch. 12 pp. 273-280			
13	M 11/16	Professional development Graduate study part 2 Majoring in Psychology		Web CT Handout: Professional development	Th 11/19 F 11/20	Exam # 3 (WP part 2)	Proposals Final (50 pts.) Portfolios review final due (20 pts.)
	W 11/18	Review for Exam # 3		Review Jackson Ch. 10, 12, 4			
14	M 11/23	Exam # 3 (MC part 1)			Th 11/26 F 11/27		
	W 11/25	Careers in Psychology	Wolf	Web CT Handout: community service learning			
15	M 11/30				Th 12/3 F 12/4		

Exams: "MC" means "multiple choice": "WP" means statistics word problems.

Instructor: Daniel Levine, Ph.D. (levine@uta.edu)

Requirement: Once again, you are required to keep a portfolio of all course work. You need to prepare a NEW portfolio for this semester (although you may wish to refer back to last semester's portfolio for important information). An important aspect of the portfolio this semester will be your documentation of your research ideas as they develop over time. This means that your journaling should comprise, in part, a "research journal" where you can explore potential topics for the required research proposal and/or make notes about research ideas that you wish to develop further by working with one or more members of the psychology faculty.

Recall: According to **APA's Assessment Cyberguide for Learning Goals and Outcomes,** portfolios have a strong potential for achieving certain learning outcomes: "Explicit criteria that ask students to select "works" based on what these reveal about their research skills can provide an opportunity to evaluate the evolution of their abilities through a focused reflection on why they selected the items they did." This point is an important one when we consider your choice of an individual research project.

Q. What is a portfolio?

A. A portfolio is a collection of papers, projects, and assignments completed in classes required in the psychology major. For the student, the portfolio represents a record of development in skills and
competencies required in the major. It also represents a record of   accomplishments which can be used to support applications for employment and   graduate school. For the faculty, the portfolio is a source of information to determine whether the goals of the psychology curriculum are being attained.

Q. What is the purpose of keeping a portfolio?

A. A course portfolio serves primarily 3 functions:

1. A portfolio is an opportunity to integrate your notes, the text, lab assignments and other material, therefore providing an effective **study method**. Thus, you may reinforce and further develop your writing and computer skills. You are expected to retain at least information from earlier courses to later courses. In fact, by obtaining a GPA of 2.0 in PSYC 2443 and 2444, you can be cleared to enroll in upper-level laboratory courses. A course portfolio may be a very valuable resource for your future coursework.

2. A portfolio stands as an **historical record** or documentation summary of some of the content that you learned in the course. This record may help you obtain admission to the graduate program of your choice in that it may help you to write your personal statement or essay for graduate admission. It may also help you convince a potential employer of your readiness for a particular job.

3. Portfolio preparation may help you to **know yourself better** and to define more clearly your personal and professional goals. Part of your portfolio will consist of reflective journaling, that is, writing down your ideas and reactions to assignments and evaluations. Except for weeks in

which exams occur, we expect you to make notes weekly. Weekly notations should be made on your reflections upon your experiences as a pre-professional. Obviously, such reflective thinking may assist you in defining your strengths, weaknesses and career aspirations.

Q. How will my portfolio be evaluated?

A. The rubric we will be using to evaluate the portfolio is provided below. You will receive the final grade you attained on this assignment but interim grades (see **1** and **2** below) will be provided as the course proceeds.

Presentation of Portfolio (See also Week 16)

Scoring level	Action	1	2	F
16-20-accomplished	Student maintained all assignments carefully and organized the portfolio well.			
11-15--competent	Student showed good effort toward organization and presentation of the portfolio.			
6-10--developing	Student's course portfolio was only fairly complete and reflective journaling was not done consistently.			
1-5--beginning	Student exhibited minimal attention to portfolio organization and presentation. Multiple assignments were omitted.			
0	(Incomplete)			

Additional comments:

Score =   **/20**

Student certification: I have reviewed the above scores and comments with my instructor.

_____   _____
                Signature   Date

Adapted from **APA's Assessment Cyberguide for Learning Goals and Outcomes:**

In PSYC 2443 and 2444, we will be addressing multiple goals as outlined below by the American Psychological Association (APA).

KEY:

PRE	Prerequisites
LEC	PSYC 2443/2444 Lecture and readings
LAB	PSYC 2443/2444 Lab and readings
EXA	PSYC 2443/2444 Examinations
POR	PSYC 2443/2444 Portfolio

Goal 1: Knowledge Base of Psychology

Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

Objective	PRE	LEC	LAB	EXA	POR
1.1: Characterize the nature of psychology as a discipline.	√	√	√	√	√
1.2: Demonstrate knowledge and understanding representing appropriate breadth and depth in selected content areas of psychology: theory and research representing general domains, the history of psychology, relevant levels of analysis, overarching themes, and relevant ethical issues.	√	√	√	√	√
1.3: Use the concepts, language, and major theories of the discipline to account for psychological phenomena.	√				
1.4: Explain major perspectives of psychology (e.g., behavioral, biological, cognitive, evolutionary, humanistic, psychodynamic, and sociocultural).	√				

Goal 2: Research Methods in Psychology

 Understand and apply basic research methods in psychology, including research design, data analysis, and interpretation.

Objective	PRE	LEC	LAB	EXA	POR
2.1 Describe the basic characteristics of the science of psychology.	√	√	√	√	√
2.2 Explain different research methods used by psychologists. Describe how various research designs address different types of questions and hypotheses. Articulate strengths and limitations of various research designs. Distinguish the nature of designs that permit causal inferences from those that do not.		√	√	√	√
2.3 Evaluate the appropriateness of conclusions derived from psychological research. Interpret basic statistical results. Distinguish between statistical significance and practical significance. Describe effect size and confidence intervals. Evaluate the validity of conclusions presented in research reports.	√	√	√	√	√

Objective		√	√	√	√
2.4 Design and conduct basic studies to address psychological questions using appropriate research methods. Locate and use relevant databases, research, and theory to plan, conduct, and interpret results of research studies. Formulate testable research hypotheses, based on operational definitions of variables. Select and apply appropriate methods to maximize internal and external validity and reduce the plausibility of alternative explanations. Collect, analyze, interpret, and report data using appropriate statistical strategies to address different types of research questions and hypotheses. Recognize that theoretical and sociocultural contexts as well as personal biases may shape research questions, design, data collection, analysis, and interpretation.		√	√	√	√
2.5 Follow the APA Code of Ethics in the treatment of human and nonhuman participants in the design, data collection, interpretation, and reporting of psychological research.		√	√	√	√
2.6 Generalize research conclusions appropriately based on the parameters of particular research methods. Exercise caution in predicting behavior based on limitations of single studies. Recognize the limitations of applying normative conclusions to individuals. Acknowledge that research results may have unanticipated societal consequences. Recognize that individual differences and sociocultural contexts may influence the applicability of research findings.		√	√	√	√

Goal 3:   Critical Thinking Skills in Psychology

 Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.

Objective	PRE	LEC	LAB	EXA	POR
3.1 Use critical thinking effectively.	√	√	√	√	√
3.2 Engage in creative thinking.	√	√	√	√	√
3.3 Use reasoning to recognize, develop, defend, and criticize arguments and other persuasive appeals.	√	√	√	√	√
3.4 Approach problems effectively.	√	√	√	√	√

Goal 4:   Application of Psychology

Understand and apply psychological principles to personal, social, and organizational issues.

Objective	PRE	LEC	LAB	EXA	POR
4.1 Describe major applied areas of psychology (e.g., clinical, counseling, industrial/organizational, school, health).	√	√	√	√	√
4.2 Identify appropriate applications of psychology in solving problems, such as…	√	√	√	√	√
4.3 Articulate how psychological principles can be used to explain social issues and inform public policy.	√	√		√	
4.4 Apply psychological concepts, theories, and research findings as these relate to everyday life.	√	√	√	√	√
4.5 Recognize that ethically complex situations can develop in the application of psychological principles.	√	√	√	√	√

Goal 5:   Values in Psychology

Value empirical evidence, tolerate ambiguity, act ethically, and reflect other values that are the underpinnings of psychology as a science.

Objective	PRE	LEC	LAB	EXA	POR
5.1 Recognize the necessity for ethical behavior in all aspects of the science and practice of psychology.	√	√	√	√	√
5.2 Demonstrate reasonable skepticism and intellectual curiosity by asking questions about causes of behavior.	√	√	√	√	√
5.3 Seek and evaluate scientific evidence for psychological claims.	√	√	√	√	√
5.4 Tolerate ambiguity and realize that psychological explanations are often complex and tentative.	√	√	√	√	√
5.5 Recognize and respect human diversity and understand that psychological explanations may vary across populations and contexts.	√	√	√	√	√
5.6 Assess and justify their engagement with respect to civic, social, and global responsibilities.	√	√	√	√	√
5.7 Understand the limitations of their psychological knowledge and skills.	√	√	√	√	√

Goal 6:   Information and Technological Literacy

Demonstrate information competence and the ability to use computers and other technology for many purposes.

Objective	PRE	LEC	LAB	EXA	POR
6.1 Demonstrate information competence at each stage in the following process: formulating a researchable topic, choosing relevant and evaluating relevant resources, and reading and accurately summarizing scientific literature that can be supported by database search strategies	√	√	√	√	√
6.2 Use appropriate software to produce understandable reports of the psychological literature, methods, and statistical and qualitative analyses in APA or other appropriate style, including graphic representations of data.	√	√	√	√	√
6.3 Use information and technology ethically and responsibly.	√	√	√	√	√
6.4 Demonstrate basic computer skills, proper etiquette, and security safeguards.	√	√	√	√	√

Goal 7:   Communication Skills

Communicate effectively in a variety of formats.

Objective	PRE	LEC	LAB	EXA	POR
7.1 Demonstrate effective writing skills in various formats (e.g., essays, correspondence, technical papers, note taking) and for various purposes (e.g., informing, defending, explaining, persuading, arguing, teaching).	√	√	√	√	√
7.2 Demonstrate effective oral communication skills in various formats (e.g., group discussion, debate, lecture) and for various purposes (e.g., informing,. defending, explaining, persuading, arguing, teaching).	√		√		
7.3 Exhibit quantitative literacy.	√	√	√	√	√
7.4 Demonstrate effective interpersonal communication skills.	√	√	√		
7.5 Exhibit the ability to collaborate effectively.	√		√		√

Goal 8:   Sociocultural and International Awareness

Recognize, understand, and respect the complexity of sociocultural and international diversity.

Objective	PRE	LEC	LAB	EXA	POR
8.1 Interact effectively and sensitively with people from diverse backgrounds and cultural perspectives.	√	√	√	√	√
8.2 Examine the sociocultural and international contexts that influence individual differences.	√	√	√	√	√
8.3 Explain how individual differences influence beliefs, values, and interactions with others and vice versa.	√	√	√	√	√
8.4 Understand how privilege, power, and oppression may affect prejudice, discrimination, and inequity.	√	√			√
8.5 Recognize prejudicial attitudes and discriminatory behaviors that might exist in themselves and others.	√	√	√	√	√

Goal 9:   Personal Development

Develop insight into their own and other's behavior and mental processes and apply effective strategies for self-management and self-improvement.

Objective	PRE	LEC	LAB	EXA	POR
9.1 Reflect on their experiences and find meaning in them.	√				√
9.2 Apply psychological principles to promote personal development.	√				√
9.3 Enact self-management strategies that maximize healthy outcomes.	√				√
9.4 Display high standards of personal integrity with others.	√	√	√	√	√

Goal 10:   Career Planning and Development

Pursue realistic ideas about how to implement their psychological knowledge, skills, and values in occupational pursuits in a variety of settings.

Objective	PRE	LEC	LAB	EXA	POR
10.1 Apply knowledge of psychology (e.g., decision strategies, life span processes, psychological assessment, types of psychological careers) to formulating career choices.	√				√
10.2 Identify the types of academic experience and performance in psychology and other coursework that will facilitate entry into the work force, post-baccalaureate education, or both.	√	√			√
10.3 Describe preferred career paths based on accurate self-assessment of abilities, achievement, motivation, and work habits.	√				√
10.4 Identify and develop skills and experiences relevant to achieving selected career goals.	√	√	√	√	√
10.5 Demonstrate an understanding of the importance of lifelong learning and personal flexibility to sustain personal and professional development as the nature of work evolves.	√				√