

Research Design and Analysis

The University of Texas at Dallas

PSY 3392 (OH1), Spring 2026

Mondays from 10 – 11:15 AM in GR 4.428

In this course learn the research methods that make psychology a science to develop skills as consumers and potential producers of research and to foster scientific literacy.

"Science literacy empowers you to know when someone else is full of !#?*&%."

Neil deGrasse Tyson, 2020

Contact Information

Instructor	Email	Office Phone
Meridith Grant, Ph.D.	MGrant@UTDallas.edu	972-883-4108
Office hours		
You are invited to meet with me to discuss course material, college life, graduate school or to simply say "hi".		
<ul style="list-style-type: none">• Book a time to meet virtually• Book a time to meet in person in GR 4.820• TA contact information and hours will be posted in eLearning.		
Communications Policy		
Contact us by email using your UTD email account (not by phone, eLearning or Teams message). When you email, include the course name and section, as well as your first and last name. <i>We will do our very best</i> to respond to your message within 24 hours on regular workdays. Anticipate longer delays on weekends, holidays, and during busy times in the semester.		

General Information

Course Pre-requisites, Co-requisites, and/or Other Restrictions

You must have completed PSY 2317, PSY 3390 or STAT 1342 to take this course.

Description

Advanced techniques for research design and data analysis in the behavioral sciences, with an emphasis on identifying meaningful hypotheses, implementing research practices, and interpreting and communicating research findings.

Required Materials

1. Cozby, P. C. & Bates, S. C. (2024) *Methods in Behavioral Research* (15th ed.). McGraw Hill. Access to the [digital textbook and companion website "Connect"](#) are mandatory for success in the class. When you log in to eLearning and access your first Smartbook assignment, you will be prompted with a pay screen. Alternatively, you may purchase an access code card through the UTD bookstore (ISBN 9781266290077). The price may be different.
2. Additional required materials will be posted in eLearning.
3. You must have access to a reliable computer with Internet access to be successful in this class.

Learning Objectives and Career Competencies

Career Readiness

The National Association of Colleges and Employers (NACE) identifies eight core competencies in career readiness, detailed [here](#). Each competency is described using sample behaviors or skills you will practice when engaging with the course material, participating in class, and interacting with the professor and your fellow students.

Career readiness competencies are linked to the learning objectives in this course. By enrolling in PSY 3392, you are not just taking a course, you are acquiring skills that will prepare you for your career.

Learning Objective		Career Competencies	Assessment
Research Methods	Demonstrate scientific inquiry and critical thinking by classifying, interpreting, designing, and evaluating psychological research and scientific claims.	Interpret data with an awareness of factors that may impact outcomes. Analyze information from a variety of sources and individuals to fully understand a problem.	Exams Smartbook Assignments In-class Practice Questions
Ethics	Apply ethical principles across various domains including psychological research, professional practice, academic pursuits, and related professional endeavors.	Consider problems and solutions from multiple perspectives. Keep an open mind to new ideas and ways of thinking.	Week 3 Work Selected Exam 1 Questions
Professional Behavior	Demonstrate professional behavior by development of plans to utilize the degree in a meaningful way.	Arrive on time and prepared to participate fully through the end of meetings. Develop plans and goals for one's future career.	Syllabus Quiz Career Services Opportunity

How to Succeed in This Course

This course is designed for **long-term learning—not cramming**. Spread your study time across the week, ideally in **at least two separate sessions**. The material and all exams are **cumulative**, so falling behind early can make it difficult to catch up. It is also very important to read the syllabus and understand the course policies to be successful in class.

Weekly Study Guides are posted in eLearning. Use them to plan your week. They include:

- Tasks to do
- Things to learn
- Terms to understand
- A brief textbook outline
- Answers to FAQs to clarify answers to the most common questions

Lecture Materials and In-class Practice Questions

- Lecture content supplements the textbook. You are expected to study the textbook, any additional assigned materials, and attend class lectures.
- PowerPoint slides and video clips presented in class will be posted in eLearning for your reference.
- When possible, lectures will be recorded and made available in the Microsoft Teams section for this class. However, the quality of recordings and transcripts is not guaranteed. Students are not permitted to make their own audio or video recordings of lectures.
- If you miss a class and the lecture was not recorded, it is your responsibility to obtain notes from a classmate. The professor or TAs will not provide lecture notes.
- You may take notes in class by hand or using a device (e.g., laptop). Please ensure your device is silenced.
- **In-class multiple-choice and true/false practice questions** (worth 1-point each) will be administered to reinforce learning. To participate:
 - Bring a fully charged computer (preferred) or an alternative device with access to eLearning.
 - Be physically present in the classroom when questions are administered.
 - Choose the correct answer to earn credit.
 - Participation quizzes are open note, but talking to peers is not allowed.
 - Engaging in practice questions from outside the classroom or contacting peers who are not present during the quiz is considered academic dishonesty.

Exams

- Schedule your testing center reservation well in advance, preferably at the start of the semester. You are responsible for making your own reservations and complying with all testing center guidelines. To prepare for each exam:
 - Review the **Weekly Study Guides** in eLearning. Focus on key terms—understand their definitions, significance, examples, FAQs and connections.
 - Review your **class lecture notes** and revisit posted slides/recordings as needed.
 - Read the assigned article for each exam.
 - Use the **practice questions** in eLearning for each exam.
 - Each **Smartbook assignment** includes a “recharge” option to review textbook content.
 - Want to know more about how to study in general? See [here](#).

We’re Here to Help You have many chances to earn points—and we’re here to support you. Don’t hesitate to visit office hours or reach out by email during the semester!

Learning Opportunities	
Research Exposure Credit Requirement	One requirement for all students enrolled in this class is completion of two research exposure credits. Details about this requirement can be found on the course eLearning page. Research exposure credits must be completed by the date found on the REC instruction sheet or your course grade will be lowered. For each credit you fail to complete, your course grade will be reduced by 1/3 of a letter grade (e.g., for 2 missing credits, a B+ will become a B-).
Syllabus Quiz	As you review the syllabus, complete the Syllabus Quiz for up to 10 points . All questions will appear at once, and there is no time limit. You may take the quiz as many times as you'd like before the deadline to work towards earning a perfect score.
SmartBook Assignments	11 assignments , each worth 10 points (110 total). Smartbook assignments are a way to actively reading each text chapter. The platform adapts to your learning needs and is accessible via the course website. You can keep working until the due date to earn full credit. Each assignment aligns with weekly textbook topics.
In-class Practice Questions	<p>More than 70 points available in class.</p> <ul style="list-style-type: none"> • Administered at any time during class via eLearning. • You must be physically present in the classroom and select the correct answer to earn credit. • Bring a device (laptop, tablet, or phone) to participate. • No credit if absent or not in the classroom at the time—no makeups. • Multiple choice and true false questions are based on lectures and assigned articles. • You may use your class notes, but you may not talk to your peers. • You will have 5 minutes for approximately 5 questions worth 1 point each. • Question will appear one at a time, without the option to backtrack • Completing questions from outside the classroom is considered academic dishonesty. • Grades will be released immediately. • Answers to questions will not be released online. • Want to view your work? Meet 1-on-1 with your Graduate TA within 2 weeks of the assessment. Watch eLearning for instructions and available times to meet.
Career Services Opportunity	<p>Earn 10 points by connecting with a UTD Career Services representative. To receive credit:</p> <ol style="list-style-type: none"> 1. Schedule a 1-on-1 appointment with a UTD career specialist for personalized career advising. This can include: career assessment interpretation; resume, cover letter, or personal statement review; LinkedIn profile development; interview preparation; and/or networking strategies. 2. Attend the appointment and engage in the advising session. 3. Request confirmation: At the time of your appointment, ask the career advisor to send a confirmation email to both your graduate TA and professor verifying that the appointment was completed. This email confirmation is required to receive credit.

Exams

4 exams, totaling **190 points**: Exam 1 = 40 points; Exams 2 3 and 4 = 50 points each. All exams are **cumulative** and cover lectures and textbook readings. Each exam also covers a **research article**. Articles will be tested only on the exam for the section to which they are assigned.

Exam format & logistics:

- Duration: 1 hour 15 minutes
- Multiple choice and true-false questions will appear all at once
- All exams are cumulative and cover lectures and textbook readings.
- Each exam also covers one research article. Articles will be tested only on the exam for the section to which they are assigned.
- No materials or other notes may be used during the exam.
- Location: [UTD Testing Center](#) in Richardson, administered online through eLearning
- Reservation: Make a reservation early using this [link](#).
- ID Required: Bring your CometCard when you take a test. No exceptions.
- Review the Testing Center [Student Guidelines](#) prior to taking your first exam at the testing center. ARC student(s) with approved accommodations should also review the [ARC Testing Guidelines](#).
- **No make-ups for unscheduled exams. REGISTER FOR ALL OF YOUR EXAMS AT THE BEGINNING OF THE SEMESTER.** You can change dates if conflicts arise, but reservations must be made a minimum of 48 hours in advance and testing slots can fill up quickly.
- **No make-ups for a missed exams or missing/nonfunctioning Comet Cards.** Arrive at the testing center ON TIME with a working Comet Card to take your exam. For Comet Card care and replacement information see [here](#).

Getting your grades:

- Grades posted after the exam window closes.
- Answers to questions will not be released online.
- Want to view your work? Meet 1-on-1 in person or virtually with your Graduate TA within 2 weeks of the test. Watch eLearning for instructions about how to sign up.

Your Grade

Research Exposure Credits

All students enrolled in this class are required to complete two research exposure credits. Details about this requirement can be found on a separate handout on the course eLearning page. Research exposure credits must be completed by the date found on the REC instruction sheet or your course grade will be lowered. For each credit you fail to complete, your course grade will be reduced by 1/3 of a letter grade (e.g., for 2 missing credits, a B+ will become a B-).

All questions about Research Exposure Credits should go to SonaBBS@utdallas.edu.

The Rest of the Grade

There are 380+ points offered throughout the semester; however, your letter grade is calculated out of only 300 points. That means that there are **70 points of flexibility** built into your grade this semester. You choose when and how to take advantage of that flexibility.

Learning Opportunity	Points
4 Exams (Exam 1 is 40 pts; Exams 2-4 are 50 pts)	190
1 Syllabus Quiz	10
11 SmartBook assignments (10 points each)	110
1 Career Services Opportunity	10
70+ In-class practice questions, 1 pt each	70+
Total points possible	390+
Total points used to calculate your grade	320

Final Letter Grade Table	
A+	312+
A	300-311
A-	288-299
B+	276-287
B	264-275
B-	252-263
C+	240-251
C	224-239
C-	208-223
D+	192-207
D	176-191
D-	160-175
F	0-159

Earn the points you need for your desired grade during the semester, and I will do my best to support you. When final grades are posted, do not put me in an uncomfortable position by requesting that I “bump” your grade. It is unethical and unfair to other students for me to engage in such practices.

No Makeup, Late Work or Individualized Extra Credit

This course includes **over 70 points of built-in flexibility**, allowing students to miss significant components—such as an entire exam or all in-class practice questions—and still have the opportunity to earn an A+ in the course. Because of this generous buffer, the course policy is that **late work will not be accepted, due dates will not be extended, and makeup exams will not be administered**. This approach is designed to accommodate the reality of regular but unfortunate life events such as illness, childcare challenges, or emotionally difficult situations, while maintaining fairness and consistency for all students.

This policy described above will be applied **uniformly to the syllabus quiz, career services opportunity, in-class practice questions, and Smartbook assignments**. A single exception for exams is described below.

If you miss an exam for an extreme and unforeseen circumstance (e.g., car accident, hospitalization, death of an immediate family member) you may request a makeup exam. To do so, submit a petition with thorough documentation of your absence. This documentation must include:

1. A screenshot of the UTD test center reservation slot you missed.
2. A typewritten explanation of the reason for your absence.
3. Copies of all supporting materials, which must include the date and the name of the issuing party (e.g., your physician).

Your documentation must clearly indicate that you were unable to take the assessment during your scheduled time, according to a relevant authority. For example, a bill from a physician’s office showing that you were there around the time of an assessment is not adequate evidence. You must have a signed note from a physician stating that you were hospitalized or ordered to stay home from school and work during the time of your exam. Elective medical or dental appointments are never excused.

All documentation relevant to your make-up petition must be submitted via email as soon as possible after the missed assessment, or no later than the time you are permitted to return to school and work (virtually or face-to-face). If your documentation is late or incomplete, your petition will not be considered. After reviewing the evidence, I will notify you by email whether your case warrants a make-up exam. If it does not, you will receive a grade of 0 for the missed assessment. If it does, you will need to schedule a time and take the makeup exam at the UTD Testing Center in Richardson on the next available testing day (e.g., generally 48 hours after approval for a makeup).

Falsification of materials related to make-up exams is considered a violation of the Student Code of Conduct and will result in a minimum penalty of a failing grade on the exam for which the documentation was submitted.

If you are a student with an academic accommodation from the [AccessAbility Resource Center](#) or a temporary accommodation from the [Dean of Students](#), please contact me to discuss your unique circumstances and we will consider how these policies apply to you and your circumstances.

Course Schedule

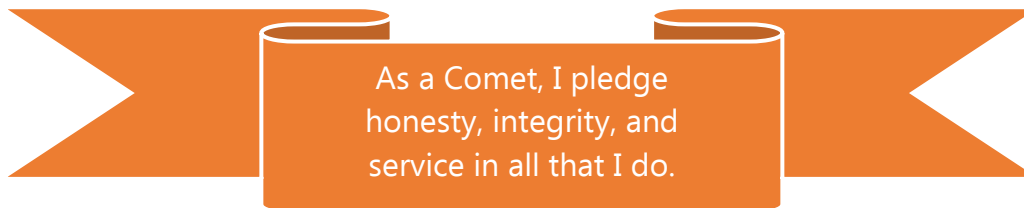
Week	Date	Class Topic	Due Dates
1	Jan 26	Scientific understanding of behavior	SmartBook 1 and 2 - 11:59 PM Sun Feb 1
2	Feb 2	Where to start in the research process	SmartBook 3 - 11:59 PM Sun Feb 8
3	Feb 9	Ethics	SmartBook 4 & Syllabus Quiz - 11:59 PM Sun Feb 15
4	Feb 16	Fundamental research issues <i>*Read before class: Graves et al., 2021</i>	SmartBook 5 - 11:59 PM Sun Feb 22
Take Exam 1 in the testing center between Mon Feb 16 and Fri Feb 20			
5	Feb 23	Measurement concepts	SmartBook 6 - 11:59 PM Sun Mar 1
6	Mar 2	Experimental designs & Conducting experiments	
7	Mar 9	Conducting experiments, cont. & Complex experimental designs	SmartBook 7 - 11:59 PM Sun Mar 22

	Mar 16	Spring Break	
8	Mar 23	Complex experimental designs, cont.	
9	Mar 30	Complex experimental designs, cont. Practice activity. <i>*Read before class: Davis & Goldfield, 2024</i>	SmartBook 8 - 11:59 PM Sun Apr 5
Take Exam 2 in the testing center between Mon Mar 30 and Fri Apr 3			
10	Apr 6	Observational methods <i>*Read before class: Onishi et al., 2025</i>	SmartBook 9 - 11:59 PM Sun Apr 12
11	Apr 13	Survey research	SmartBook 10 - 11:59 PM Sun Apr 19
12	Apr 20	Single-case, quasi, and developmental research	SmartBook 11 - 11:59 PM Sun Apr 26
13	Apr 27	Understanding research results-Statistical inference	Career Services Opportunity - 11:59 PM Sun May 3
Take Exam 3 in the testing center between Mon Apr 27 and Fri May 1			
15	May 4	Bringing it all together <i>*Read before class: Open Science Collaboration, 2015</i>	
Take Exam 4 in the testing center between Mon, May 4 and Fri, May 8			

Additional Information

Academic Honesty

This class is designed to support the development of a community of learners who are actively engaged in the learning process. Our community is built on trust, and I trust you to do the right thing. Academic dishonesty of any kind will not be tolerated. This includes, but is not limited to, plagiarizing scholarly works, taking photos of exams or other course materials, answering in-class practice questions from outside the classroom, and re-using work submitted in another course. The consequences of academic dishonesty can be serious, ranging from failing an assignment to failing the course or being placed on academic probation. You are expected to follow UTD standards for all written work in this class. If you are unsure about the difference between paraphrasing and plagiarism, please consult the [official policy](#).



Accessibility and Accommodations

It is the policy and practice of The University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the AccessAbility Resource Center (ARC) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me and allow one-week advance notice. Students who

have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact ARC for a confidential discussion. ARC is located in the Administration Building, AD 2.224. They can be reached by phone at 972-883-2098, or by email at studentaccess@utdallas.edu.

Basic needs support

The UT Dallas Basic Needs Resource Center (BNRC) connects students with both on- and off-campus resources to support needs such as housing and food insecurity, clothing donations, pregnancy and parenting support, and short-term emergency aid. One of their services, Temoc's Closet, provides free clothing and menstrual products. If you need food, the UT Dallas Comet Cupboard is a food and basic needs pantry that all students have free access to.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Contacting the Instructor and TAs

The best way to reach me is by email, using your UTD email account and sending messages to the address listed on the syllabus: MGrant@UTDallas.edu. Please do not contact me by phone or through eLearning/Teams messages. Be sure to **include the course name in the subject line and your first and last name in the body of the email message**. I strive to respond promptly, but please allow up to 24 hours for a reply, especially outside of regular working hours. If you haven't received a response within a reasonable amount of time during the workweek, feel free to send a follow-up email.

Managing Life Crisis and Finding Support

If you encounter an unexpected crisis during the semester—such as difficulties securing food or housing, mental health concerns, managing a financial emergency, or dealing with a family crisis—I strongly encourage you to contact the Graduation Help Desk, either for yourself or on behalf of a peer in need of support. If you feel uncomfortable reaching out on your own, please know that I can submit a referral for you. To learn more about the Graduation Help Desk and the resources they offer, please visit their [website](#).

Policy on the use of AI

To maintain academic integrity while using AI tools, follow these guidelines:

1. Identify & Cite
 - Clearly state when and how you used AI.
 - Include the tool name, date, and your prompt.
 - Follow APA citation format.
2. Be Transparent
 - Add an "AI Acknowledgment" section at the end of your work.
 - In your own words, explain:
 - How you used AI
 - What prompts you used

- How you revised the output
 - What you learned
3. Use Responsibly
- You are responsible for ensuring AI content is accurate, legal, and properly cited.
 - Cross-check facts with credible sources.

Undergraduate Teaching Internships

If you decide this course was worthwhile, you wish to support future students working to learn in this class, and you have done well (an A is great, but a B+ can sometimes be okay too), consider applying for a position as an undergraduate teaching assistant. The experience is listed on your transcript 1 to 3-credit course. Reach out to Dr. Grant if you are interested.

Support from eLearning

Notify eLearning tech support by email at assist@utdallas.edu or call the UT Dallas Computer Help Desk at 972-883-2911 if you have technical problems.

Recordings

Unless a student has received prior approval from the Office of Student AccessAbility and discussed their learning needs with me, recording any part of this course is strictly prohibited. Recordings may not be published, reproduced, shared with individuals outside the class, or uploaded to external platforms, except as required to implement an approved accommodation. If the instructor or any UTD school, department, or office intends to use the recordings for any other purpose, the consent of any identifiable students must be obtained unless otherwise permitted by law. Failure to comply with these requirements constitutes a violation of the [Student Code of Conduct](#).

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to [UT Dallas Syllabus Policies](#) webpage for these policies.

This syllabus is subject to change at the discretion of the professor.