

PSYC 5301 — Research Methods and Design

Fall 2026 · Section 001 (CRN 14031) · Face-to-Face · Monday & Wednesday, 2:00–3:15 p.m. · Science & Technology 179

Texas A&M University–San Antonio · Main Campus · Graduate · 3 credit hours · August 24 – December 11, 2026

Instructor	Contact
Dawn R. Weatherford, Ph.D. Psychology Faculty	Email: dweatherford@tamusa.edu Primary contact — I do not use Blackboard messages. Put PSYC 5301-001 and your full name in the subject line. I read email Monday–Friday, 8–5, and reply within 24 hours on weekdays.
Office STEC 349B	Monday 10:00 a.m.–12:30 p.m. and 3:30–4:00 p.m. Wednesday 12:00–12:30 p.m. and 3:30–4:00 p.m. Other times by appointment. Nov 16–22: at conferences and unavailable for meetings in any format. Email only, slower replies.
Class Meetings	Science & Technology 179, MW 2:00–3:15 p.m. Exception: November 16 and 18 run online and asynchronous.

Course Description

Advanced research methodology for psychological research. Focuses on methods for use with experimental research design and nonexperimental research design (e.g., correlation and multiple regression). Measurement issues are covered, including reliability and validity. Computer lab uses statistical packages for analysis of data.

Prerequisites: None. **A grade of “B” or better is required.**

Monday sessions cover one textbook chapter, led by a student: a 20-minute lecture, followed by a studio in which the class marks up flawed research reports and prescribes the repairs. Wednesday sessions critique one published empirical article against one methodological commentary, led by a student. The course motivates and culminates in the research proposal described below.

*A separate handout, **How This Course Works**, is distributed in Week 1 and covers the course design, the critique framework, and how to use resources in an open-resource course. Each assignment also has its own instructions document in Blackboard.*

Learning Outcomes

This course is organized around the five core learning goals for master's degree graduates in psychology (APA, 2018). Each goal is approached the same way: the undergraduate foundation is revisited early in the term, and the graded work assesses your ability to apply it.

APA Goal	Undergraduate foundation revisited	Master's-level outcome in this course	Assessed by
1. Knowledge Base in Psychology	Research design vocabulary, measurement, reliability and validity, sampling, and the logic of statistical inference.	Integrate design, measurement, and sampling to justify a set of interlocking decisions in one original study, and evaluate the statistical approach used in a published study.	Chapter Leadership; Article Critiques; Research Proposal
2. Scientific Mindedness	Distinguishing empirical from non-empirical sources; locating literature; reading a Method section.	Identify a researchable question, appraise the evidence bearing on it, reconstruct a published study from its Method section, identify what is missing and why, rule out alternative explanations, and derive a defensible extension.	Article Critiques; Milestones M1–M2; Research Proposal
3. Ethical and Social Responsibility in a Diverse World	APA Ethics Code, IRB review, informed consent, and debriefing.	Specify the ethical protections a proposed design requires; evaluate whether a sampling frame supports the population claims made from it; verify every source before relying on it.	Chapter Leadership (Ch. 3); Article Critiques; Milestone M4; Research Proposal
4. Communication	APA 7 formatting, citation, and reference structure.	Write a Method section another researcher could execute; teach a methodological concept to an audience that does not yet hold it; facilitate discussion and respond substantively to critique.	Chapter Leadership; Article Leadership; Research Proposal
5. Professional Development	Self-assessment and the use of instructor feedback.	Revise work in response to instructor review before presenting it to peers; document how your own reasoning changed under discussion; identify gaps in your knowledge and close them.	Instructor review of lesson plans and facilitation briefs; Article Critiques; Milestones

American Psychological Association. (2018). *APA guidelines on core learning goals for master's degree graduates in psychology*. <https://www.apa.org/about/policy/masters-goals-guidelines.pdf>

Required Materials

- McBride, D. M. (2023). *The process of research in psychology* (5th ed.). Sage. ISBN 978-1-0718-4747-3.
- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). All written work follows APA 7; the free APA Style site is an acceptable substitute.
- **Assigned articles.** Two per Wednesday — one methodological commentary and one empirical study. All PDFs are posted in Blackboard. There is nothing to purchase.
- **Power analysis software.** G*Power, JASP, or the pwr package in R. All are free. We install and use one in class.

Bring a device to class.

Workload

Three graduate credit hours over 15 weeks is roughly 135 hours total — about 9 hours a week: 2.5 hours in class plus 6–7 hours of reading, critique preparation, and proposal building. Weeks in which you lead a session or a milestone is due run heavier; most other weeks run lighter.

Assessment

Grades are based on a 1,000-point scale. The table below runs in the order the term does: the work you do every week, then the two sessions you lead, then the proposal.

Component	What it is	Points
Design Studio	Every Monday. The Studio Response you submit in Blackboard before you leave, at 20 points each. Ten run across the term and your best eight count, so two may be missed with no effect on your grade.	160
Article Critiques	Every Wednesday. The critique sheet you complete before class and revise during discussion, collected at the end of class and returned the following Monday, at 20 points each. Eleven are collected and your best nine count, so two may be missed with no effect on your grade.	180
Chapter Leadership	One Monday. A prepared 20-minute lecture on your assigned chapter, and the two research scenarios the class works for the rest of the session. Lecture 50 points; scenarios 50 points.	100
Article Leadership	One Wednesday. Leading the critique of your assigned article pairing. Facilitation brief 80 points; live session 120 points.	200
Proposal Checkpoints	Three staged submissions of your own proposal: question and rationale, Method section draft, and full draft. 30, 30, and 40 points.	100
Research Proposal	The final paper: introduction and complete Method section, APA 7 style.	260
Total		1000

Full instructions and grading criteria for every component are posted in Blackboard.

Letter grades: A = 850 and above · B = 750–849.99 · C = 650–749.99 · D = 550–649.99 · F = below 550. **A grade of “B” or better is required for this course to count toward your degree.**

Review Before You Lead

Both leadership assignments are submitted for review before the session you lead, at 11:59 p.m. on the Sunday eight days before a Monday session and ten days before a Wednesday session. Your exact deadlines are printed on the leadership rotation posted September 4; they do not move. Material that has not been reviewed and approved does not run.

All review deadlines in this course fall on or before November 1.

The Research Proposal

The proposal presents an original study testing a hypothesis derived from published literature. An incremental extension of published work is acceptable and expected.

What it contains

- **Introduction.** A focused review that establishes the problem and derives a firm, falsifiable hypothesis. Minimum one theoretical and three empirical sources. This is not an exhaustive review — it is the shortest argument that makes your hypothesis inevitable.
- **Method.** Complete and executable: participants and how they are recruited, a target sample size justified by an a priori power analysis, materials and measures specified precisely enough to obtain or build, procedure in runnable order, and the ethical protections the design requires. Someone else should be able to run your study from this section.

- **References.** APA 7, with DOIs.

What it does not contain

No results section, hypothesized findings, or inferential analysis plan is required.

An a priori power analysis is required and belongs in the Method section.

How it gets built

Three staged checkpoints, each returned with written comments before the next one is due. The Monday studio is where you rehearse the moves; the checkpoints are where you make them on your own study.

By the time Checkpoint 2 is due you will have diagnosed and repaired ten Method sections under time pressure. That is a very different starting position from a blank page.

#	Checkpoint	What it contains	Due
1	Question and rationale (30 pts)	Your research question, your hypothesis, and why it matters. One page. Cite one theoretical and two empirical sources.	Sun Oct 4
2	Method section draft (30 pts)	Participants and sample size with an a priori power analysis, materials and measures, design and the alternative you rejected, and procedure.	Sun Nov 8
3	Full draft (40 pts)	Introduction and Method together, in APA 7. This is the version you revise into the final paper.	Sun Nov 22
—	Research Proposal	Final submission.	

Attendance and Participation

Forty percent of the course grade is earned during class meetings on specific dates. No separate attendance points are assigned, and in-class components cannot be made up.

- **Both weekly components carry slack.** Eleven are collected and your best nine count. Two missed Wednesdays do not affect your grade.
- **Missing your own assigned day is different.** Contact me before the date to reschedule. An unexcused absence on the day you lead scores zero.
- **November 16 and 18 meet online**, asynchronously, with work due Sunday, November 22. Send questions before November 13 — I am at conferences November 16–22 and replies will be slow.
- **University-approved absences** — religious observance, military service, official University activity, documented illness — are accommodated. Notify me as far in advance as you can.

Academic Integrity

The reasoning you submit must be your own. Using a resource to inform your thinking is the skill; having a resource produce your work is substitution.

Every source you cite must be one you have located and read. Fabricated citations are integrity violations, not formatting errors.

All written work is submitted through Blackboard and screened with TurnItIn. The University Academic Dishonesty Policy — cheating, plagiarism, fabrication, multiple submissions, facilitating dishonesty — applies in full; consequences range up to a failing grade in the course and referral. If you are unsure whether something is allowed, ask before you submit.

Course Policies

Submitting Work and Late Policy

All written work is submitted through Blackboard; no paper or emailed copies are accepted. Late work is not accepted without a University-approved excuse. In-class components occur on their scheduled day.

Scenarios and facilitation briefs submitted after their deadline may not be reviewed before the scheduled session date. A scenario that has not been green-lit does not run.

Generative AI Policy

Generative AI tools are permitted for the material you prepare in advance to teach the class: your lecture slides and your two research scenarios. You are not required to use them. Any AI-generated material that appears in what you present must be cited, in text and in your reference list. Guidance for citing AI generators such as ChatGPT: <https://apastyle.apa.org/blog/how-to-cite-chatgpt>.

Generative AI may not be used in any form for the Design Studio, the Article Critiques, the Proposal Checkpoints, or the Research Proposal. This restriction is not limited to generated text. Consulting a large language model about these is not permitted — including for ideas, outlines, summaries of the assigned articles, feedback on a draft, or editing. These are your own analysis and must be entirely your own work.

Written work in this course is screened with TurnItIn AI-use detection. Using an AI tool in a way this policy does not permit, or presenting AI-generated material without attribution, is academic dishonesty and violates Texas A&M University–San Antonio's standards of academic integrity.

University Policies and Student Resources

University policies and student support resources — disability accommodations, Title IX, religious observance, financial aid and attendance verification, counseling, emergency preparedness, tutoring and writing support, basic needs, military affairs, and students' rights and responsibilities — are provided in a separate document, PSYC 5301 University Policies and Student Resources, posted in Blackboard. That document is part of this syllabus.

Key Dates — Fall 2026

Date	Event
Mon, Aug 24	First class day
Mon, Aug 31	Last day to register
Mon, Sep 7	Labor Day — University closed, no class
Wed, Sep 9	Census date (attendance verified for financial aid)
Mon–Fri, Oct 5–16	Midterm grading period
Fri, Nov 13	Last day to drop with an automatic grade of “W”
Mon & Wed, Nov 16 & 18	Class meets online (asynchronous)
Mon–Sun, Nov 16–22	Instructor at conferences — no meetings, online or in person; email only
Wed, Nov 25	University Study Day — no class
Thu–Sat, Nov 26–28	Thanksgiving holiday — University closed
Mon, Nov 30	Last day to withdraw from the University
Wed, Dec 2	Last class meeting for this section
Fri, Dec 4	Last day of scheduled weekday classes
Sat–Fri, Dec 5–11	Final examination period — no in-person meeting for this section. Research Proposal due on or before this section's scheduled exam block.
Fri, Dec 11	End of term

Course Schedule

Chapter readings are completed before the Monday that covers them. Article pairings are read and the critique sheet completed through the first-pass column before the Wednesday that critiques them. Everything in the Due column is due at 11:59 p.m. on the date shown.

Part I — The Research Process (Weeks 1–9)

Week	Monday	Wednesday	Due
Week 1 Aug 24 & 26	Course launch. Design challenge.	Critique framework and Method section requirements.	Wed Aug 26: leadership preference form.
Week 2 Aug 31 & Sep 2	Ch. 1 — Behavioral Research. Studio 1, instructor-led.	Article critique, instructor-led. Sheet 1.	Leadership rotation posted Fri Sep 4.
Week 3 Sep 9 only (Labor Day Sep 7)	No class — Labor Day.	Article critique, worked together. Sheet 2. Census date.	
Week 4 Sep 14 & 16	Ch. 2 — Hypothesis Development. Studio 2.	Article critique. Sheet 3.	
Week 5 Sep 21 & 23	Ch. 3 — Ethical Guidelines. Studio 3.	Article critique. Sheet 4.	
Week 6 Sep 28 & 30	Ch. 4 — Data Collection and Research Designs. Studio 4.	Article critique. Sheet 5.	Sun Oct 4: Checkpoint 1 — question and rationale.
Week 7 Oct 5 & 7	Ch. 5 — Variables and Measurement. Studio 5.	Article critique. Sheet 6.	
Week 8 Oct 12 & 14	Ch. 6 — Sampling. Studio 6.	Article critique. Sheet 7.	
Week 9 Oct 19 & 21	Ch. 8 — Reporting Research. Studio 7, instructor-led.	Article critique. Sheet 8.	

Part II — Designs and the Proposal (Weeks 10–15)

Week	Monday	Wednesday	Due
Week 10 Oct 26 & 28	Ch. 11 — Correlational Studies. Studio 8.	Article critique. Sheet 9.	
Week 11 Nov 2 & 4	Ch. 12–13 — One-Factor and Multi-Factor Experiments. Studio 9.	Article critique. Sheet 10.	Sun Nov 8: Checkpoint 2 — Method section draft.
Week 12 Nov 9 & 11	Ch. 14 — Quasi-Experiments. Studio 10.	Article critique, instructor-led. Sheet 11.	Fri Nov 13 — last day to drop with a “W.”
Week 13 Nov 16 & 18 ONLINE	Online — Ch. 10 and Ch. 15: Survey Research and Specialized Designs.	Online — proposal build. Post your draft; respond to two classmates.	Sun Nov 22: Checkpoint 3 — full draft. Instructor unavailable Nov 16–22.
Week 14 Nov 23 only	Proposal workshop — full drafts reviewed.	No class — Study Day (Nov 25). Thanksgiving Nov 26–28.	
Week 15 Nov 30 & Dec 2	Alignment review — Method section against research question.	Last class meeting — proposal read-out and course wrap.	Mon Nov 30 — last day to withdraw.
Finals Dec 5–11	No in-person meeting.	No in-person meeting.	Research Proposal due in Blackboard on or before this section’s scheduled exam block.

I will follow this schedule as closely as possible, but topics may shift. Keep up with any changes posted in Blackboard.

Textbook Coverage — All 15 Chapters

Ch.	Title	Covered	Led by
1	Behavioral Research: The Whys and Hows of the Scientific Method	Week 2	Instructor
2	Hypothesis Development: Where Research Questions Come From	Week 4	Student
3	Ethical Guidelines for Psychological Research	Week 5	Student
4	How Psychologists Use the Scientific Method	Week 6	Student
5	Variables and Measurement in Research	Week 7	Student
6	Sampling	Week 8	Student
7	Summarizing and Interpreting Data: Using Statistics	Reading only	See note
8	Reporting Research	Week 9	Instructor
9	More About Using Statistics	Reading only	See note
10	More About Survey Research	Week 13 (online)	Instructor
11	More About Correlational Studies	Week 10	Student
12	More About One-Factor Experiments	Week 11	Student
13	More About Multi-Factor Experiments	Week 11	Student
14	More About Quasi-Experiments	Week 12	Student
15	More About Other Specialized Designs	Week 13 (online)	Instructor

Chapters 7 and 9 are assigned reading and are not covered in a class session. A priori power analysis is covered and assessed in this course.