TEXAS TECH UNIVERSITY
Institute *for* Studies *in* Pragmaticism™

COMMON METHODS FOR CROSS-DISCIPLINARY RESEARCH

PRAG 5301 CRN:18333
Spring Semester 2026

Instructors of Record:

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Schedule

Fridays 10:00 – 1:00 / Room 305, main library building

With Guest Lectures (TBD)

COURSE DESCRIPTION

This course will introduce graduate students to the principles and practices of conducting innovative cross-disciplinary research across disciplines. Students will learn how to integrate knowledge and methods from multiple disciplines to address complex scientific questions and societal challenges. Through case studies, workshops, and hands-on projects, students will develop the skills necessary to conduct innovative and impactful research that needs cross-disciplinary knowledge.

Why should I take this class?

The course teaches methods for exploring innovative research across disciplines; it helps you develop communication skills to interact with other fields and learn how to represent your case effectively in competitive environments. Enhancing your interdisciplinary skills opens opportunities to leverage your benefits in any professional environment.

What distinguishes this course from other Interdisciplinary or Transdisciplinary Studies programs?

The course utilizes the Relational Reasoning Approach method, a method based on logic that allows to practice setting common goals and develop integrated and individual models for problem-solving.

LEARNING OUTCOMES

- Identify and connect similarities across different disciplines.
- Apply methodologies learned in one situation to new situations.
- Communicate effectively in teams, showcasing cross-disciplinary empathy.
- Develop the ability to learn, identifying research questions and shared goals.
- Combine relevant experiences and academic knowledge.

Prerequisites: Graduate Standing. May be repeated once for credit.

The course is open to graduate students in any discipline.

ASSESSMENT PLAN

Plenary sessions (60% grading)

a- Introduction to Cross-Disciplinary Research (10%)
- Overview of the benefits and challenges of cross-disciplinary research
- Discussion of different models of collaboration between disciplines

- Introduction to case studies of successful and unsuccessful cross-disciplinary research projects

b- Interdisciplinary Communication and Collaboration (10%)
- Techniques for effective communication and collaboration with researchers from different multiple fields
- Tools for facilitating interdisciplinary meetings and discussions
- Guest speaker: a cross-disciplinary research team sharing their experiences and insights

c- Ethical Considerations in Cross-Disciplinary Research (10%)
- Discussion of ethical challenges that may arise in cross-disciplinary research projects
- Strategies for navigating ethical issues that involve multiple disciplines
- Case study: examining ethical dilemmas in a cross-disciplinary research context

d- Proposal Writing and Funding Opportunities (10%)
- Overview of strategies for writing successful cross-disciplinary research proposals
- Introduction to funding opportunities that support cross-disciplinary research
- Workshop: developing a research proposal for a cross-disciplinary project

e- Project Presentations (20%)
- Students will present their research proposals – add details presentation within course and a poster for the workshop.

Working Group Sessions (40% grading)

a- Identifying Research Questions and Objectives (10%)
Discussing and identifying groups of 3-2-2
- Developing clear research objectives that align with the goals of multiple disciplines
- Formulating a research plan that integrates methods from different fields

b- Literature Review and Synthesis (10%)
- Strategies for conducting a comprehensive literature review across multiple disciplines
- Synthesizing findings from different fields to inform the research design
- Hands-on activity: developing a literature review that bridges multiple disciplines

c- Data Collection and Analysis (10%)
- Overview of methods for collecting and analyzing data in cross-disciplinary research
- Introduction to integration of data from different sources and disciplines
- Hands-on workshop: designing a data collection and analysis plan for a cross-disciplinary project

d- Experimental Design and Implementation (10%)
- Principles of experimental design that are applicable across disciplines
- Strategies for implementing experiments that involve multiple methodologies
- Case study: analyzing a cross-disciplinary research project with complex experimental design

EVALUATION

PLENARY MODULES Attendance and Participation (60%)	GROUP MODULES Implementation (40%)
1. Introduction to Cross-Disciplinary Research (10%)	1. Identifying Research Questions and Objectives (10%)
Eval: Knowledge Integration: Ability to synthesize and apply knowledge from different disciplines to solve complex problems.	
2. Interdisciplinary Communication and Collaboration (10%)	2. Literature Review and Synthesis(10%)
Eval: Critical Thinking: Assessment of analytical skills, including the ability to evaluate arguments, identify biases, and think independently.	
3. Ethical Considerations in Cross-Disciplinary Research (10%)	3. Data Collection and Analysis (10%)
Eval: Research Skills: skills in conducting research that draws on multiple fields, including formulation of research questions and methodology.	
4. Proposal Writing and Funding Opportunities (10%)	4. Experimental Design and Implementation (10%)

Eval: Creative Problem-Solving: Innovation in approaching problems through interdisciplinary perspectives, showcasing creativity in solutions.
5. Project Presentations (20%)
Eval: Cross-disciplinary Perspective: Appreciation and respect for various disciplines and their intellectual traditions, including the ability to view issues from multiple viewpoints.

INTELLECTUAL RIGHTS

In this graduate course, we emphasize the importance of intellectual property rights related to course materials, research, and collaborative projects. All content created in this course, including lectures, presentations, and assignments, will be considered the intellectual property of the ISP department, with all rights reserved. Any distribution or use of course materials outside of this context must be approved by the department to protect its collective intellectual assets.

Texas Tech Policies Concerning Academic Honesty, Special Accommodations for Students with Disabilities, Student Absences for Observance of Religious Holy Days, and Accommodations for Pregnant Students.

https://www.depts.ttu.edu/tlpdc/RequiredSyllabusStatements.php