I. Overview
What kinds of issues do geographers engage with? How do they decide which paradigms, theories and methods to use? What challenges do they face in conducting research? This course aims to help you answer those questions and to improve your own research design skills. The main learning objectives are:

1) to design your own research project effectively,
2) to evaluate critically the research designs of others,
3) to develop your appreciation of how knowledge is acquired, and
4) to prepare you for your future geography courses

By the end of this course, you will have come to appreciate the diversity of methods in geography, the appropriateness of different methods for different research questions, and the standards by which each method should be evaluated. In the process, you will also learn about the broad range of work taking place in our own Science Hall.

II. Outline of Course Content
This course is divided into two parts. The first half introduces you to the scientific method and its critiques. The second offers you a survey of different strategies that geographers use to collect data in their research. Both sections will start from a conventional, scientific perspective and move to a more qualitative, interpretive one.

Lecture Outline
A. Research Design
Week 1. Introduction to the Course
Week 2. The Geographical Tradition
Week 3. Different Paradigms
Week 4. Defining a Research Problem
Week 5. Moving from Ideas to Measures
Week 6. Sampling Strategies
Week 7. Critiques of the Scientific Method
Week 8. Midterm Exam

B. Research Strategies
Week 9. Models and Experiments
Week 10. Surveys and Interviews
Week 11. Spring Break
Week 12. Field Research and Ethnography  
Week 13. Archive Sources and Discourse Analysis  
Week 14. AAG  
Week 15. Ethics and Politics in Research  
Week 16. Final Exam

III. Reading  
Required Text:  

Recommended texts:  

There will be an assigned chapter from the required textbook to read each week. For each chapter there is also a short online quiz to complete that will test whether you are able to apply the concepts introduced in the book. You must complete the reading and quiz before the Tuesday class of that week. To ensure you have the correct edition of the book and access to the online materials please purchase your copy from Rainbow Bookstore on Gilman Street (just off State St).

In addition to the course text, you will be required to read and discuss published articles written by professors in the UW-Madison Geography Department. They are available in PDF form through the course Learn@UW site. The aim here is twofold. First, I want you to become more familiar with the range of research interests in the department. This will help you identify faculty who share your own interests. Second, these publications will illustrate key themes, concepts and techniques that we are covering. You must complete the faculty articles by the Thursday class of that week. You will be given instructions in lecture on “how” to read the articles during lectures, so attending class will enable you to be a much more efficient reader. And, yes, reading material is examinable!

IV. Assessments  
For the main piece of work in this class, you will be asked to formulate an original research problem and specify the appropriate methods to answer that question. This project requires you to put lecture material into practice. It also involves library research and the creative assimilation of existing literature, in order to specify your own research question. You will write and rewrite sections of this project throughout the semester in order to clarify your thinking and sharpen your research focus.

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<th>Assessment</th>
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<tr>
<td>Midterm Exam</td>
<td>20%</td>
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<tr>
<td>Research Project Components</td>
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<td>• Brief statement of topic</td>
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<td>• Revised topic &amp; literature rev.</td>
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• Proposed methodology

Final Research Report 30%
Final Exam 20%
Class Participation and Quizzes 15%

There will be a midterm exam during class in week 8, and a final exam during the last week of the semester. The exams will require you to apply your knowledge to a novel research problem. To participate in the course you need to come to class having completed all the required readings and ready to engage in discussion. Some weeks, you will be responsible for leading discussion on a faculty article.

V. Weekly themes

Part I: Research Design

Week 1. Introduction to the Course (Jan 20 & Jan 23*)
Objectives: This week will be an overview of the structure and content of the course. I will also provide an overview of the research interests of all members of the UW-Madison Geography faculty.
Readings: The webpage of every member of faculty in the department
          Heather Rosenfeld’s “Beyond the Old Boys Club?”

Week 2. The Geographical Tradition (Jan 27 & 29)
Objectives: We’ll begin with a brief introduction to the history of the philosophy of geography. By the end of the week you should be able to better situate yourself and your research interests in the field.
Readings: Babbie Chapter 1 “Human inquiry and science”
          R. Hartshorne 1939. The Nature of Geography. Lancaster, PA; Association of American Geographers, pp. 460-469

Week 3. Different Paradigms (Feb 3 & 5)
Objectives: This week we’ll compare different paradigms and examine the relationship between theory and empirics. I will also discuss how you go about constructing a literature review.
Readings: Babbie Chapter 2 “Paradigms, Theory and Research”
Deadline: 1-page statement of topic due on Feb 3

Week 4. Defining a Research Problem (Feb 10 & 12)
Objectives: The objective of this week is to delineate the different steps in a research project. We will then focus on how to operationalize a piece of research.

Readings: Babbie Chapter 4 “Research design”

Week 5. From Ideas to Measures (Feb 17 & 19)
Objectives: This week we will work through the idea that there are different ways to think about and measure social phenomenon, and different criteria to assess the quality of these measures.

Readings: Babbie Chapter 5 “Conceptualization, operationalization, and measurement”

Week 6. Sampling Strategies (Feb 24 & 26)
Objective: All empirical research involves some form of sampling, so you need to know which strategy is appropriate for which type of question. We’ll also explore how diverse data is reduced into a more manageable form.

Readings: Babbie Chapter 6 “Indices, scales, and typologies”
- Babbie Chapter 7 “The logic of sampling”

Week 7. Critiques of the Scientific Method (March 3 & 5)
Objective: This week we’ll look at how the scientific method has been critiqued from a range of perspectives including humanism, Marxism, feminism, antiracism and postmodernism.

Readings: Review Babbie chapters

Deadline: Revised topic & literature review due on March 3

Week 8. Midterm Exam (March 10 & 12)

Part II: Research Strategies
Week 9. Models and Experiments (March 17 & 19)
Objectives: This week we begin exploring different techniques for collecting data. We start with the classic form of scientific data collection: the experiment. We will also look at how geographers try to model social and environmental processes.

Readings: Babbie Chapter 8 “Experiments”

Week 10. Surveys and Interviews (March 24 & 26)
Objectives: This week we examine another classic form of social-science data collection: surveys and interviews. To deepen our understanding, we will go “behind the scenes” and look at a research project in progress.

Readings: Babbie Chapter 9 “Survey research”
R.E. Roth 2013. “An empirically-derived taxonomy of interaction primitives for interactive cartography and visualization”, *TVCG* 19, 12, 2356-65

Week 11. Spring Break

Week 12. Field Research and Ethnography (April 7 & 9)
Objectives: Geography has a longstanding tradition of field research. This week we turn to a popular example of that technique: ethnography.

Readings: Babbie Chapter 10 “Qualitative field research”
S. Young “Adhocism: the rise of college entrepreneurs in north India”, under review at *Transactions of the Institute of British Geographers*

Weeks 13. Archive sources and discourse analysis (April 14 & 16)
Objectives: It isn’t always possible or desirable to talk to people in order to collect data. This week we consider basic unobtrusive methods and how to conduct a discourse analysis.

Readings: Babbie Chapter 11 “Unobtrusive research”
I’m away at a conference this week, so we will not meet for class.
**Deadline:** Proposed methodology due on April 23

Weeks 15.  **Ethics & Politics in Research (April 28 & 30)**
Objectives: We save perhaps the most difficult topic for last: the question of ethics and politics in research. I will introduce you to some typical issues that arise in the practice of research, discuss various strategies of coping with these issues, and ask you to incorporate a discussion of ethics, politics, and positionality into the final draft of your research proposal.
**Readings:**
- Babbie Chapter 3 “The ethics and politics of social research”
- M. Robertson 2010. “Performing Environmental Governance”, *Geoforum* 41, 1, 7-10

Week 16.  **Final Exam (May 5 & 7)**
**Deadline:** Final Research Proposal due on May 11 by 5pm.