
GEOG 5800
Research Design and Geographic Applications
Fall, 2015
Monday 6:00-8:50pm
ENV 345

Catalog Description: Themes in geographical research, application of scientific method in spatial problem-solving and analysis.

Introduction: This course introduces you to methods and approaches to geographic research that are a vital part of your education and experience at the graduate level. As a graduate student in the department of geography or a related program, it is important that you understand the fundamentals of geographical research, including

- research design
- proposal creation
- research execution
- analysis
- oral, written, and poster presentation of research results, including writing for publication in an academic journal

We will be examining all aspects of the research process above throughout this course. It is my hope that this course will help and encourage your development as a research professional in your graduate studies here at UNT.

Instructor: Dr. Murray Rice

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Class: M, 6:00 to 8:50 pm

Classroom: ENV 115

Office Hours: M, 2:00 to 4:00 pm (or by appointment)

Class Web Page: <http://www.murrayrice.com/geog-5800.html>

Additional resources available via the computers in CSAM labs (we will discuss this in class)

Course Philosophy: I am here to organize the course and introduce you to the topics and readings we will examine. I don't have all the answers, and I don't pretend to have all the answers, but I will share with you from what I know. I will do my best to make the course interesting, relevant, and challenging.

This being said, it's important that you understand that you have the most important role in making GEOG 5110 a success for you. You will determine how much you actually get out of this course. Doing the readings outlined, completing course work to the best of your ability, and coming to class ready to think and participate in group discussions puts you in the best position to benefit from what this course offers. I encourage you to make full use of the learning opportunities that this class presents.

My Promise to You: I want to be clear about what I promise to do for you when you come to talk with me, and what I cannot promise to do.

(a) I promise to answer thoughtful, focused questions you have related to the course. A focused question might be something like "I don't understand this comment you made on my literature review, could you please help me understand?", or "Can you help me understand why this research question is not appropriate for my project?"

(b) I cannot promise to answer broad, open-ended questions, even if related directly to the course. An open-ended question might be something like "Here is my draft research plan. Can you please read it and give me some comments?" or "Here is a revised version of the literature review I handed in earlier in the course. Can you please tell me if this would be good enough for an A grade now?"

(c) Related to (b) above, I cannot promise to read through draft material (or revised versions of material already submitted) to provide general feedback and suggestions. Please do not hand in drafts or revised work for me to read and give you comments. *To be clear:* feel free to talk to me about your work (and even bring sections along to discuss), but please make sure you have thoughtful, focused questions to ask.

Required Text: The required text is Montello, D.R. and P.C. Sutton (2013) *An Introduction to Scientific Research Methods in Geography & Environmental Studies* (2nd Edition), Los Angeles: SAGE Publications. Selected external readings will also be assigned for you to complete throughout the semester (see course schedule in this syllabus). We will discuss access to these additional readings in our first class.

Grading: It is not essential to pass any particular exam or assignment to pass the course, but relative success in each will have an impact on your final grade.

Initial Assignment:	Geographic Interests Summary (due Sept 14)	10%
Class Participation:	Discussions throughout semester	10%
Term Project:	Literature Review (due September 28)	20%
	Problem Statement (due October 12)	20%
	Paper (due November 23)	20%
	Oral Presentation (November 16 and 23)	20%

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the

semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.

Geographic Interests Summary: This is a two- to three-page (single-spaced) indication of why you are interested in studies and a career in geography, due on September 16. In this short paper, please address each of these items:

- how you came to pursue a Master's degree in this department (or in your other department of studies, if you are a student from another department)
- why geography (or your particular discipline if not geography) is of interest to you personally
- how you see your graduate degree contributing to your career plans

The paper is intended to give you an opportunity to reflect on your own personal interests and direction as you undertake your degree work here. No outside research is necessary, as the focus of this paper is on you. However, I expect you to take this assignment seriously, as the progression of ideas we will address in this course assumes that you have done this kind of thinking as a starting-point for what we do throughout the remainder of the semester.

Term Project: This course provides you with the opportunity to complete a term project tailored to your Master's program and interests. The project includes a literature review, problem statement, comprehensive paper, and oral presentation (components due at various times through the semester). The focus of the project can be one of two types:

1. A research outline. The research outline is not required to reflect your final direction for your research here at UNT, but rather it gives you a chance to start working through some of the issues and begin defining the questions you may wish to study in your thesis. Requirements for the research outline will be covered in detail in class. This option is open to all students, although it will apply most particularly to those students who have already decided to follow the thesis option.

2. A report representing the completed results of a geographic study. The report will involve gathering, presenting, and evaluating a geographic data set in an area of your choice. The emphasis here is on the process you follow and how you present your results, not on the results themselves, although I expect your analytical work to be academically rigorous. The paper should be at least 15 pages of text, typed, and double-spaced. It must include a title, abstract, tables, figures, a reference list, appropriate section headings, and it must cite at least seven journal articles. This option is open to all students. However, this option will be of most value to students who (A) are not following our thesis option, and (B) already have a dataset and research idea they can apply in short order (i.e. you can complete a small project by mid-November). I strongly encourage students who will be writing a thesis to pursue the research outline option.

Late Policy: Anything handed in late* will be subject to an immediate 10% penalty. Late work will not be accepted after graded work has been handed back to the class. Graded work is usually returned to the class one week after the due date. I will grant exceptions to the above if you provide documentation or an acceptable explanation that substantiates a valid personal emergency. I will be the judge of what constitutes a “valid personal emergency”.

Due Dates: Presentation and other due dates are final and will not be changed regardless of student circumstances (except for emergencies as outlined above). It is your responsibility to plan outside activities so they will not conflict with class dates.

Extra Credit: The Department of Geography does not allow extra credit assignments (work not specified on a course syllabus). Please do not ask me to circumvent this departmental policy.

Attendance Policy: Consistent attendance is essential and required in this course.

- Unexcused, undocumented absences will result in a 5% penalty per absence from your final class percentage grade: this deduction is taken from your 10% “class participation” grade, so two unexcused absences = a grade of zero for your class participation grade.
- More than two unexcused absences will result your automatic withdrawal from the course.
- It is *your* responsibility to provide reasons/documentation for absences for there to be any possibility of having an absence counted as “excused” (I will not approach you to ask).

* Late = “after the beginning of class on the assigned due date”.

Academic Dishonesty: Academic dishonesty in this course will be penalized according to University of North Texas rules and regulations, ranging from a mark of 0 on a test or assignment, to a grade of “F” in the class, to possible suspension or expulsion from the university, depending on the precise nature and circumstances of the dishonesty. Learning what is dishonest and how to stay away from such conduct is good preparation for a successful career.

To help you avoid academically dishonest behavior, the Center for Student Rights and Responsibilities at the University of North Texas has developed a definition of academic dishonesty and a set of strategies to protect yourself from being accused of academically dishonest behavior. The following is a summary of definitions and strategies from CSRR:

Forms of Academic Dishonesty

- **Cheating:** intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. The term academic exercise includes all forms of work submitted for credit or hours.
- **Plagiarism:** the deliberate adoption or reproduction of ideas, words or statements of another person as one’s own without acknowledgement.
- **Fabrication:** intentional and unauthorized falsification or invention of any information in an academic exercise.
- **Facilitating academic dishonesty:** intentionally or knowingly helping or attempting to help another to violate a provision of the institutional code of academic integrity.

Proactive strategies to protect yourself from charges of academic dishonesty:

1. Prepare thoroughly for examinations and assignments.
2. Take the initiative to prevent other students from copying your assignments; do not lend assignments to other students.
3. Consult the Code of Student Conduct for a detailed definition of academic dishonesty.
4. Utilize a recognized handbook for instruction on citing source materials in papers.
5. Consult with individual faculty or academic departments when in doubt.
6. Utilize the services of the University Writing Center, located in room 105 of the Auditorium Building, for assistance in preparing papers.
7. Refuse to assist students who cheat.

Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT.

Course Schedule

The readings outlined below are an important part of the course. Please have module reading assignments completed before you come to class each week. I may also assign additional readings from other sources – watch for this during the course. Remember that attendance is required for all classes (see attendance policy).

WEEK

TOPIC

PART 1 – COURSE INTRODUCTION AND FOUNDATIONS

1 (Aug 24)

Introduction to Geographic Research

No reading assignment for this week (but one will be provided for you to review before our next meeting)

- Overview of course and term project options
- Discussion on previous student research experience and ideas
- Group brainstorming on research in various field settings

2 (Aug 31)

Effective Use of Library Research Resources

Flowerdew, “Finding Previous Work on the Topic” (chapter 4 in Flowerdew and Martin, *Methods in Human Geography*)

- Note: Meeting at UNT Willis Library (Willis Library, Room 136)
- UNT library research resources overview (library staff presentation)
- Searching previous work and the importance of the literature review
- Discussion of term project literature review (due October 5)

3 (Sep 7)

Labor Day (No Class)

Please use your time this week to:

1. Complete your “geographic interests” summary, and
2. Begin thinking about your term project.

The items above should be related (i.e. don’t think of them as completely independent activities). On the term project in particular:

- If you are thinking of completing the research plan option, you should focus on defining your research topic and developing a preliminary list of articles and books relevant to your interests.
- If you are thinking of completing the report option, you should focus on identifying a research topic and a dataset to analyze.

4 (Sept 14)

The Nature of Scientific Research

Montello and Sutton, "Introduction: A Scientific Approach to Geography and Environmental Studies" (Chapter 1 in Montello and Sutton, *Scientific Research Methods in Geography & Environmental Studies*)

Marshall, "Geography as a Scientific Enterprise" (Chapter 5 in Johnston, *The Future of Geography*)

"Geographic interests" summary due today

- Scientific method and research in geography
- The spectrum of approaches to geographic research
- Discussion of student research ideas and expectations/guidelines for the term project (both the research plan and report options)
- Form small groups (3-4 people) for discussion in all upcoming peer feedback sessions (Sept 21, Oct 5, Nov 9)

5 (Sept 21)

Article Case Studies and Literature Review Peer Feedback

Four sample research articles (see course website for links)

Draft literature review due today (please bring paper copies of your draft literature review to class)

Read, analyze and critique the four research article case studies provided with the course readings (as you read each article, answer the questions from the case study handout also provided on the course website): we will discuss each article in class. In addition, we will have some time for you to divide up into small groups (3-4 people) to discuss your literature reviews and provide constructive feedback.

- E-mail your draft literature review to me and your small group by noon on Sept 18
- What makes a good research article?
- Overview of the elements of good research
- The focus of the literature review discussion time today is for you to get peer feedback on your work
 - Thus, I will be present in the classroom today to coordinate the four-article case study discussion and to answer overall questions on the literature review
 - However, I will leave after that so you can proceed with the core of your peer discussion in your groups
- Foreseeable reasons for missing class today must be presented for approval in advance (all classes in this course are important, but this is a particularly important one)

PART 2 – RESEARCH FOUNDATIONS

6 (Sep 28)

Research Design, Part One: The Basics

Montello and Sutton, Chapter 2 “Fundamental Research Concepts”

Haring and Lounsbury, Chapter 2 “Defining Geographic Problems”

Term project literature review due today

- Defining the problem, study area, and hypothesis
- Basic research plan
- Elements of a thesis proposal

7 (Oct 5)

Research Design, Part Two: Peer Feedback

No reading assignment for this week

Draft term project problem statement due today (please bring 4 paper copies of your draft problem statement to class)

- E-mail your draft problem statement to me and your small group by noon on Oct 2
- Our in-class activity this week will focus on dividing into small groups (3-4 people) to discuss each problem statement
- The focus of the session today is for you to get peer feedback on your work
 - Thus, I will be present in the classroom today to talk briefly about research problem statements, to answer overall questions on problem statements in general, and to get you started on your group discussion
 - However, I will leave after that so you can proceed with the core of your peer discussion in your groups
- Foreseeable reasons for missing class today must be presented for approval in advance (all classes in this course are important, but this is a particularly important one)

PART 3 – IMPLEMENTING YOUR PLAN

8 (Oct 12)

Data Acquisition

Montello and Sutton, Chapter 4 “Data Collection in Geography and Environmental Science: Overview”

Haring and Lounsbury, Chapter 4 “Acquisition of Relevant Data”

Final term project problem statement due today

- Discussion of a few possible issues
- Considerations for both human and physical geography research

9 (Oct 19)

Data Analysis

1. Tabachnik and Fidell, Chapter 1
2. Waters, “Statistics: How Much Should the GIS Analyst Know?”

- Data screening and selecting variables for analysis
- Issues related to spatial analysis

PART 4 – PRESENTING YOUR RESULTS

10 (Oct 26)

Writing Theses and Reports

Boyle and Flowerdew, “Designing the Report” (chapter 17 in Flowerdew and Martin, *Methods in Human Geography*)

- Organization and considerations for writing
- Working with your major professor and committee

11 (Nov 2)

The Publication Process

Montello and Sutton, Chapter 3 “Scientific Communication”

- Observations from personal experience on both writing and reviewing for publication in scholarly journals and books
- Examples from selected journals in geography and related fields

12 (Nov 9)

Effective Conference Presentations, and Term Project Discussion

Montello and Sutton, Chapter 3 “Scientific Communication” (again)

Draft term project paper (research plan) due to be sent out via e-mail to your small group by Nov 15 (please bring 1 paper copy of your draft project paper to class, and be prepared to comment on your overall plans in class)

- E-mail your draft project paper to your group and me by noon on Nov 6
- Planning for oral paper sessions
- Creating and presenting posters that impact the audience positively
- Also, we will have some time in class to discuss the draft papers (please read the project papers circulated by the other members of your small group, and come ready to talk about your plans and comment on the plans of the others in your small group)
- As with our earlier peer review sessions, I will be in the classroom to complete the lecture and start the discussion, but the main portion of the discussion is for you and your groups
- Foreseeable reasons for missing class today must be presented for approval in advance (all classes in this course are important, but this is a particularly important one)

13 (Nov 16)

Student Presentations, Part One

No reading assignment for this week

- 15 minute presentations with 5 minutes for questions following each
- Foreseeable reasons for missing class must be presented for approval in advance (it is extremely important that everyone in the class is present to observe and comment on all of the presentations)

14 (Nov 23)

Student Presentations, Part Two

No reading assignment for this week

Term projects (paper portion) due today

- 15 minute presentations with 5 minutes for questions following each
- Foreseeable reasons for missing class must be presented for approval in advance (it is extremely important that everyone in the class is present to observe and comment on all of the presentations)

15 (Nov 30)

Course Wrap-Up

No reading assignment for this week

Term projects (paper portion) returned today

- Concluding case study discussion, plus time for remaining presentations (if any)

Note: as part of our regular meeting time, throughout the semester our class may occasionally receive presentations on the personal research of some of the faculty members our department. I am endeavoring to include these presentations in your course experience so you receive a variety of views on research and the broad spectrum of research possibilities in the department.

I have not noted these presentations in the course schedule included here, but I may provide you with a schedule of these presentations once the course is well underway in September.

My goal in this course is for your time here to be of great value to you. This course is all about preparing you for the research you will do to complete your master's degree. However, even more importantly, I am trying through this course to give you some insight into the skills and thinking you will need as you begin your career after graduation.

Please do not hesitate to let me know if there is anything else we can do, beyond what you see in this course package, that could be useful in helping you successfully complete your graduate studies here, and in preparing you for your future.