

GEOG 325: Research Methods

Fall '11 Syllabus

Lecture 4:00-5:15 T/R, MS 321

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Course Description: Geography 325: Research Methods is a key component of your geographical education. It is designed to expose you to a full range of geographical research techniques, improve your ability to develop and clarify research questions in geography, provide you with the skills to read, comprehend and interpret a wide range of research papers in geography, and finally, help you learn to present your work in writing and speech.

Course Goals:

- **Introduction to breadth and depth of geographic research**
- **Introduction to qualitative and quantitative research tools used in geography**
- **Conduct library and online searches to identify and access scientific research material**
- **Interpret scientific research findings**
- **Write scientific research questions**
- **Introduction to regulatory and ethical aspects of scientific research**

Required Text:

Class Reader. The contents for this reader will be jointly produced from materials provided by me and materials gathered by you. I expect you to produce a bound hard copy of this Class Reader. Binding does not have to be complex. A large paper clip will do., but that is pretty minimal.

Webcampus: <https://webcampus.unr.edu/webct/logon/1050407799011>

Readings: There is **no required text**, however there are a couple of textbook chapters I will provide you and a whole slew of **other scholarly readings** for this class. I will provide you textbook chapters, some web reading resources and a couple of the scholarly readings. You will be responsible for compiling the bulk of your own class reader using scholarly materials provided by me and materials subsequently gathered by you for Assignment #2. This exercise is not simply busy work, but designed to provide you an introduction to and practice in accessing and downloading research articles.

You will spend as much as **2-4hrs reading each week**, so keep up, especially the scholarly articles; success in this class will be dependent on you doing so. Please read all assigned materials for each week **before** our class meeting.

Assignments and Questions: This class is designed with on-going work, not major mid or end of semester assignments or exmas. **Assignments**, along with **attendance**, and **guest faculty lecture research questions** (2 questions per faculty due the week following the guest lecture) will make up the entirety of your grade. The format for the 9 assignments is **12pt, double-spaced, Times New Roman font**. The format for the research questions is **12pt, single-spaced, Times New Roman font, bulleted**. A class organized such as this requires considerable commitment, including your willingness on occasion to work in groups and to work outside of class.

We will be using **WebCampus**. All assignments and faculty guest lecture questions must be submitted in electronic format to WebCampus. WebCampus constitutes “cloud” based computing. As a result, it is imperative that you maintain backup copies of all your assignments in the event that the “cloud” vaporizes. The **format for submission** of materials must be followed **exactly** as the examples demonstrate below.

LastnameFirstname-****-MMDD

If I were submitting assignment #1

HeatonJill-Assignment#1-0902

If I were submitting faculty guest lecture questions for Dr. Paul Starrs

HeatonJill-Starrs-0902

Grading: Grading is based upon the successful, effective, and timely completion of all assignments, including written research questions based upon the geography faculty guest lecturers. No questions are required for our Librarian or EH&S guest lecturers.

There are a total of **1690 pts** to lose in this class.

10 assignments at 100 pts each, 1000 pts total

Attendance and participation in 29 scheduled class periods at 10 pts each, 290 pts total, and

Eight guest faculty lectures at 50 pts each, 400 pts total.

Assignments are individually explained within the Course Outline. For each guest lecture you must generate three possible research questions based upon their area of expertise. This assignment will be easier if you stick to the subject matter of their presentation or any assigned readings for which they are an author. Research questions are due the week following the guest lecture.

Attendance Policy: Lecture attendance is mandatory. Only one spot is left open, 07 October, when most of the department will be in Fairbanks, Alaska, for the Association of Pacific Coast Geographers annual meeting. Please be prompt and present – being there (or not) counts. On several of the class days we will be spending time at specific sites outside of the Geography Department. It is your responsibility to know when we are supposed to be where.

Academic Dishonesty: Academic dishonesty is against university as well as the system community standards. Academic dishonesty is defined as: cheating, plagiarism or otherwise obtaining grades under false pretenses.

Plagiarism is defined as submitting the language, ideas, thoughts or work of another as one's own; or assisting in the act of plagiarism by allowing one's work to be used in this fashion. **Cheating is defined as** (1) obtaining or providing unauthorized information during an examination through verbal, visual or unauthorized use of books, notes, text and other materials; (2) obtaining or providing information concerning all or part of an examination prior to that examination; (3) taking an examination for another student, or arranging for another person to take an exam in one's place; (4) altering or changing test answers after submittal for grading, grades after grades have been awarded, or other academic records once these are official. For more details, see http://www.cis.unr.edu/ecatalog/Default.aspx?article_list_id=11076.

Students with Disabilities: If you have a disability for which you will need to request accommodations, please contact me and the Disability Resource Center (Thompson Building, Suite 101) as soon as possible to arrange for appropriate accommodations. For more details, see <http://www.unr.edu/stsv/slservices/drc/index.asp>.

GEOG 325: Research Methods
Fall '11 Course Outline
Lecture 4:00-5:15 T/R, MS 321

WEEK 1 30 August	Lecture: Introduction; Finding Journal Articles
01 September	No Class
Assignments	<p>Assignment #1 “Class Reader” (Due 15 September): The ENTIRETY of this assignment must be completed ALONE. Go to the LIBRARY to complete this assignment. DO NOT PRINT to the Geography Computer Lab.</p> <p>1) Find, download, and print (or electronic) copies of the following assigned readings: Starrs (2007); Downes, L. (2008); Pattison, W. (1990a); Robinson, (1976); Pattison (1990b); Larson and Santelmann (2007); Mensing et al. (2008); Garcia and Stokes (2005); Cablk and Heaton (2006); Underwood et al. (2004); MacArthur and Wilson (1963); Mensing et al. (2004); Quiring (2007); Heaton et al. (2008); Bassett and Edwards (2003); Parsons (1986). See end of syllabus for full details on these articles.</p> <p>2) Access and print the following readings online.</p> <p>a) http://www.phoenix5.org/articles/GouldMessage.html</p> <p>b) http://wolfweb.unr.edu/homepage/fbiondi/Biondi2001.pdf</p> <p>c) http://chronicle.com/wiredcampus/article/1328/wikipedia-founder-discourages-academic-use-of-his-creation</p> <p>d) http://www.english.ucsb.edu/faculty/ayliu/courses/wikipedia-policy.html</p> <p>e) http://www.chicagomanualofstyle.org/tools_citationguide.html</p> <p>f) http://www.wildnevada.org/contemplating-the-navel-why-the-geographic-center-of-nevada-matters-2.html</p> <p>Combine all the class readings and produce a class reader. Bring to class on the due date (electronic or paper), there is no electronic assignment to post on Google Groups.</p>
WEEK 2 06 September	Faculty Guest: Tod Colgrove, Head of DeLaMare Library. No research questions.
08 September	Faculty Guest: Stephanie Woolf, Director UNR Environmental Health and Safety, “EH&S Compliance”. No research questions.
WEEK 3 13 September	Faculty Guest: Dr. Paul Starrs, Full Professor, Geography-“Geographical Culture History”. Research questions due one week from today.
15 September	Lecture: Writing Research Questions; The Four Traditions of Geography Group Discussion: Pattison (1990)
Readings	<ul style="list-style-type: none"> • Starrs, P. 2007. When the dozers came, only music was left: Ry Cooder on Chavez Ravine. <i>Geographically Review Essay</i> 97(3):404–417. • Downes, L. “Ry Cooder’s American West.” <i>The New York Times</i> 23 November 2008, late edition: TR8–9. • Watch Video: http://www.nytimes.com/interactive/2008/11/23/travel/23ry_cooder/index.html • Pattison, W. 1990a. The Four Traditions of Geography. <i>Journal of Geography</i> 89(5):203–26. Reprint of 1964 article. • Robinson, J. L. 1976. A New Look at the Four Traditions of Geography. <i>Journal of Geography</i> 75(9):520–530. • Pattison, W. 1990b. Introduction to 1990 Reprint of The Four Traditions of Geography. <i>Journal of Geography</i> 89(5):202.
Assignments	Assignment #2 “The Geographic Center of Nevada” (Due 22 September): Develop a working title for a research paper on each of Pattison’s Four Traditions of Geography based upon the concept of the Geographic Center of Nevada. Photos of the Geographic Center of Nevada are provided in order to help stimulate ideas...should you need assistance. Be creative.
WEEK 4	

20 September	Faculty Guest: Donnie Curtis, Head of Special Collections, Director of Research Collections and Services, University Library, UNR. Meet at Knowledge Center, Room 104. No research questions.
22 September	Lecture: Plagiarism; Wikipedia; How to Read a Scientific Paper
Readings	<ul style="list-style-type: none"> • Young, J. R. 2006. Wikipedia Founder Discourages Academic Use of His Creation. The Wired Campus Blog. Chronicle of Higher Education. http://chronicle.com/wiredcampus/article/1328/wikipedia-founder-discourages-academic-use-of-his-creation • Liu, A. Professor, Department of English, UC Santa Barbara. Student Wikipedia Use Policy. http://www.english.ucsb.edu/faculty/ayliu/courses/wikipedia-policy.html. I have adopted this policy in all of my classes. • How to Read A Scientific Paper from Purdue University Libraries. http://www.lib.purdue.edu/phys/inst/scipaper.html • Chicago-Style Citation Quick Guide (in-text citation [T] and reference-list entry [R] styles) http://www.chicagomanualofstyle.org/tools_citationguide.html
WEEK 5	
27 September	Lecture: APCG Program Review
29 September	Lecture: Behavioral Observations and Archives
Reading	<ul style="list-style-type: none"> • <i>Research Methods</i>, Ch. 5 • APCG Program not available as of 30 August. When it is available it will be found at http://bss.sfsu.edu/geog/apcg/
Assignments	<p>Assignment #3 “An Meeting Program Review” (Due 06 October): Identify four abstracts in the APCG Program.</p> <ol style="list-style-type: none"> 1) Identify four abstracts in the APCG Program that interest you. 2) Referring back to the Chicago-Style Citation Quick Guide provide complete citations for each abstract you identify. 3) Describe in brief why they are of interest to you. <p>Assignment #4 “A Periodical Review” (Due 11 October): See Journal List in Ch 13 of <i>Research Methods</i>. Pick a three-year period of a journal that interest you. Review table of contents, and pick some articles that strike you as being of interest – either good or bad. Review the abstracts, then read the most interesting.</p> <ol style="list-style-type: none"> 1) Classify or categorize the sorts of material that a given geographic journal publishes. Write this up. Do not count on what the editors or the journal says about itself – You look at the articles, and decide. Give six examples (correctly cited, using the Chicago-Style Citation Quick Guide, see link below) of journal articles you consider typical. 2) Pick the outliers – the most interesting and least interesting article. Give a citation to each, and in no more than two or three sentences, explain why it’s of interest (or not). 3) Find, download, print out, and include a copy of the “Instructions for Authors” for the journal. In a summary paragraph, discuss what you’ve learned about geography from looking at this journal. This assignment should come in at a total length of about 2–3 pages, double-spaced, with attachments extra (i.e. Citations and Instructions).
WEEK 6	
04 October	Faculty Guest: Jeffery Thompson, Administrative Faculty, Assistance State Climatologist-Nevada State Climate Office. No research questions.
06 October	Lecture: Surveys, Interviews and Test
Readings	<ul style="list-style-type: none"> • <i>Research Methods</i>, Ch. 6 • http://www.climate.unr.edu/ • Larson, K. L. and M. V. Santelmann. 2007. An analysis of the relationship between residents’ proximity to water and attitudes about resource protection. <i>The Professional Geographer</i> 59(3):316–333.
Assignments	<p>Assignment #5 “The Survey as Data” (Due 25 October): In 1–2 pages please summarize Larson and Santelmann (2007). Describe their... (Please use the following as headings, or some variation of so that I can easily find your answers.)</p> <ol style="list-style-type: none"> 1) research objectives/goals;

	2) methods (i.e. report instrument, type of open and/or closed items, and how they administered their report); and 3) their research conclusions.
WEEK 7 11 October	Faculty Guest: Rohit Patil, Administrative Faculty, Geography-“Mobile Data Collection Systems”. No research questions.
13 October	Faculty Guest: Katia Albright, Mackay Career Development Coordinator. No research questions.
WEEK 8 18 October	Faculty Guest: Dr. Scott Bassett, Assistant Professor, Geography, Research questions due one week from today.
20 October	Faculty Guest: Dr. Scott Mensing, Full Professor, Geography-“Paleoecology” Research questions due one week from today.
Readings	<ul style="list-style-type: none"> • Mensing, S., J. Smith, K. B. Norman, M. Allen.2008. Extended drought in the Great Basin of western North America in the last two millennia reconstructed from pollen records. <i>Quaternary International</i> 188(2008):79–89. • Trammell, E.J., P.J. Weisberg, S. Bassett. 2011. Avian response to urbanization in the arid riparian context of Reno, USA. <i>Landscape and Urban Planning</i> 102(2):93–101.
WEEK 9 25 October	Faculty Guest: Doug Boyle, Associate Professor, Geography-Paleoclimate Modeling. Research questions due one week from today.
27 October	Faculty Guest: Duncan Aldrich, Director @One, “Dataworks”. No research questions.
Readings	<ul style="list-style-type: none"> • Garcia, A. F. and M. Stokes. 2005. Late Pleistocene highstand and recession of a small, high-altitude pluvial lake, Jakes Valley, central Great Basin, USA. <i>Quaternary Research</i> 65(2006):179–186.
WEEK 10 01 November	Lecture: Statistical Data Analysis
03 November	Faculty Guest: Thomas Albright. Assistant Professor, Geography. Climate Impacts. Research questions due one week from today.
Readings	<ul style="list-style-type: none"> • <i>Research Methods</i>, Ch. 9 • Gould, S. J. 1985. The median isn’t the message. <i>Discover</i> 6:40–42. • Albright, T.P., A.M. Pidgeon, C.D. Rittenhouse, M.K. Clayton, C.H. Flather, P.D. Culbert, B.D. Wardlow, and V.C. Radeloff. 2010. Combined effects of heat waves and droughts on avian communities across the conterminous United States. <i>Ecosphere</i> 1(5):art12.
Assignments	<p>Assignment #6 “Place Based Learning” (Due 6 or 8 December):</p> <ol style="list-style-type: none"> 1) Pick a Nevada “place” of interest. 2) Identify two maps that cover your place of interest, one present day map and one historical map (<1950). Compare and contrast these maps on at least one non-cartographic attribute (i.e. road distribution, cities, geography, topography, etc.). 3) Locate a minimum of 12 references (e.g. articles, books, book chapters, films, interviews, photos, etc.) related to your “place”. There must be at least two reference addressing the non-cartographic attribute you chose to compare and contrast between your two maps. There must be at least two references from the UNR Special Collections and University Archives. 4) Provide a short 1–3 sentence explanation of each references and it’s connection to your “place”. 5) Based upon your references and interest construct a working title for a research essay. 6) Place your essay idea loosely within one of Pattison’s Four Traditions and explain as necessary. 7) Prepare 2 ppt slides introducing your Place (1, 2, 3 Student Presentation).
WEEK 11 08 November	Great Basin Consortium (7-9, UNR) Lecture: Physical Measurements
10 November	Faculty Guest: Dr. Mella Harmon, Adjunct Faculty Geography “The Role of Historic Preservation in Geography and Land Use Planning”. Research questions due one week from today.
Readings	<ul style="list-style-type: none"> • <i>Research Methods</i>, Ch. 4 • Mires, P. B. 2007. “Some thoughts on looking at old houses.” Handout. University of Delaware

	Geography Teacher Summer Institute, July 9-13, 2007. Find Reading on WebCampus
Assignments	Assignment #7 “Great Basin Consortium Review” (Due 17 November): Attend a minimum of three oral presentations. It should take you no more than a page to summarize each talk. For each talk provide/summarize the following 1) Presenter name and affiliation 2) Objective/hypothesis/reason/purpose of research presentation 3) Briefly describe their methods 4) Briefly describe their results/conclusions http://environment.unr.edu/consortium/ as of 30 Aug the program details have not yet been released, but when they are you will find them linked via this website.
WEEK 12	
15 November	Lecture: Experimental and Non-Experimental Research Design, Sampling
17 November	Faculty Guest: Scotty Strachan, Administrative Faculty, Geography-“ Using dendrochronology as an archaeological dating tool”. Research questions due one week from today.
Readings	<ul style="list-style-type: none"> • <i>Research Methods</i>, Ch. 7 and 8 • Marvin, A. S. and T. L. Smiley 1968. <i>An introduction to tree-ring dating</i>. The University of Arizona Press • Cablk, M. E. and J. S. Heaton. 2006. Accuracy and reliability of dogs in surveying for desert tortoise (<i>Gopherus agassizii</i>). <i>Ecological Applications</i> 16(5):1926–1935. • Underwood, S.J., G. P. Ellrod, and A. L. Kuhnert. 2004. A multiple-case analysis of nocturnal radiation-fog development in the Central Valley of California utilizing the GOES nighttime fog product. <i>Journal of Applied Meteorology</i> 43(2):297–311.
Assignments	Assignment #8 “They Did What, When, Where and How?” (Due 29 November): In 1–2 pages please summarize Cablk and Heaton (2006) OR Underwood et al. (2004). Please use the following as headings, or some variation of so that I can easily find your answers. 1) What are their stated research objectives/goals/hypotheses? 2) What form of empirical control(s) are used? 3) Identify the independent and dependent variables? 4) Laboratory or field setting? 5) Was computational modeling used? 6) What are the major conclusions/findings?
WEEK 13	
22 November	Faculty Guest: Franco Biondi, Full Professor, Geography-“Dendrochronology Methods” Research questions due next week. Research questions due one week from today.
24 November	Thanksgiving Holiday
Readings	<ul style="list-style-type: none"> • Biondi, F. 2001. Dendrochronology. <i>In Plant Sciences Vol 2</i>, ed R. Robinson, 65-68. Macmillan Reference USA. http://wolfweb.unr.edu/homepage/fbiondi/Biondi2001.pdf .
WEEK 14	
29 November	Lecture: Figure and Tabular Data Interpretation Group Discussion: Mensing et al. (2004) or Quiring (2007)
01 December	Lecture: Geographic Information Systems
Readings	<ul style="list-style-type: none"> • MacArthur, R. H. and E. O Wilson. 1963. An Equilibrium Theory of Insular Zoogeography. <i>Evolution</i> 17(4):373–387. • Just Plain Data Analysis: Companion Website. http://lilt.ilstu.edu/jpda/ • Edward Tufte website http://www.edwardtufte.com/tufte/gould • Mensing, S. A., L. V. Benson, M. Kashgarian, and S. Lund. 2004. A Holocene pollen record of persistent droughts from Pyramid Lake, Nevada, USA. <i>Quaternary Research</i> 62(1):29–38. • Quiring, S. M. 2007. Trends in publication outlets of geographer-climatologists. <i>The Professional Geographer</i> 59(3):357-364. • Heaton, J. S. and others. 2008. Spatially explicit decision support for selecting translocation areas for Mojave desert tortoises. 2008. <i>Biodiversity and Conservation</i> 17:575–590. • Bassett, S. D. and T. C. Edwards, Jr. 2003. Effect of different sampling schemes on the spatial placement of conservation reserves in Utah, USA. <i>Biological Conservation</i> 113:141–151.

Assignments	<p>Assignment #9 “Figure and Tabular Data Interpretation” (Due 13 December): This assignment is broken into an in class and out of class portion. You will break into groups and discuss the graphics presented in Mensing et al. (2004) and Quiring (2007). Each group will be responsible for turning in a short summary of each table/figure. This summary needs to convey the contents of the table/figure. In other words, what point does it get across.</p> <p>Assignment #10 “GIS?” (Due 13 December): In a 1–2 page essay discuss the specific uses of GIS by Heaton et al. (2008) OR Bassett and Edwards (2003).</p>
WEEK 15	
06 December	Lecture: 1, 2, 3 Student Presentations (1 student, 2 slides, 3 minutes)
08 December	Lecture: 1, 2, 3 Student Presentations (1 student, 2 slides, 3 minutes)
WEEK 16	FINALS WEEK STARTS Wednesday
13 December	Lecture: Parsons (1986)
Reading	<ul style="list-style-type: none"> Parsons, J. J. 1986. A geographer looks at the San Joaquin Valley. <i>Geographical Review</i> 76(4):371–389.
WEEK 16	FRIDAY
15 December	Final: 5:00-7:00pm

Journal Article Portion of Class Reader

- Albright, T.P., A.M. Pidgeon, C.D. Rittenhouse, M.K. Clayton, C.H. Flather, P.D. Culbert, B.D. Wardlow, and V.C. Radeloff. 2010. Combined effects of heat waves and droughts on avian communities across the conterminous United States. *Ecosphere* 1(5):art12.
- Bassett, S. D. and T. C. Edwards, Jr. 2003. Effect of different sampling schemes on the spatial placement of conservation reserves in Utah, USA. *Biological Conservation* 113:141–151.
- Cablk, M. E. and J. S. Heaton. 2006. Accuracy and reliability of dogs in surveying for desert tortoise (*Gopherus agassizii*). *Ecological Applications* 16(5):1926–1935.
- Downes, L. “Ry Cooder’s American West.” The New York Times 23 November 2008, late edition: TR8–9.
- Garcia, A. F. and M. Stokes. 2005. Late Pleistocene highstand and recession of a small, high-altitude pluvial lake, Jakes Valley, central Great Basin, USA. *Quaternary Research* 65(2006):179–186.
- Heaton, J. S. and others. 2008. Spatially explicit decision support for selecting translocation areas for Mojave desert tortoises. 2008. *Biodiversity and Conservation* 17:575–590.
- Larson, K. L. and M. V. Santelmann. 2007. An analysis of the relationship between residents’ proximity to water and attitudes about resource protection. *The Professional Geographer* 59(3):316–333.
- MacArthur, R. H. and E. O Wilson. 1963. An Equilibrium Theory of Insular Zoogeography. *Evolution* 17(4):373–387.
- Mensing, S. A., L. V. Benson, M. Kashgarian, and S. Lund. 2004. A Holocene pollen record of persistent droughts from Pyramid Lake, Nevada, USA. *Quaternary Research* 62(1):29–38.
- Mensing, S., J. Smith, K. B. Norman, M. Allen. 2008. Extended drought in the Great Basin of western North America in the last two millennia reconstructed from pollen records. *Quaternary International* 188(2008):79–89.
- Parsons, J. J. 1986. A geographer looks at the San Joaquin Valley. *Geographical Review* 76(4):371–389.
- Pattison, W. 1990a. The Four Traditions of Geography. *Journal of Geography* 89(5):203–26. Reprint of 1964 article.
- Quiring, S. M. 2007. Trends in publication outlets of geographer-climatologists. *The Professional Geographer* 59(3):357–364.
- Robinson, J. L. 1976. A New Look at the Four Traditions of Geography. *Journal of Geography* 75(9):520–530.
- Pattison, W. 1990b. Introduction to 1990 Reprint of The Four Traditions of Geography. *Journal of Geography* 89(5):202.

Starrs, P. 2007. When the dozers came, only music was left: Ry Cooder on Chavez Ravine. *Geographically Review Essay* 97(3):404–417.

Trammell, E.J., P.J. Weisberg, S. Bassett. 2011. Avian response to urbanization in the arid riparian context of Reno, USA. *Landscape and Urban Planning* 102(2):93–101.

Underwood, S. J., G. P. Ellrod, and A. L. Kuhnert. 2004. A multiple-case analysis of nocturnal radiation-fog development in the Central Valley of California utilizing the GOES nighttime fog product. *Journal of Applied Meteorology* 43(2):297–311.