

# **GEO 7300 – ADVANCED GEOGRAPHIC RESEARCH DESIGN TEXAS STATE UNIVERSITY\*, SPRING 2006**

**Instructor:** Mark A. Fonstad

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**Office Hours:** 12:00 PM – 2:00 PM Mondays or by appointment

**Class Time:** 2:00 PM – 4:45 PM Mondays

**Classroom:** Evans Liberal Arts (ELA) Building, Room 313

**Course Line Number:** 292646

## **COURSE DESCRIPTION**

The purpose of this course is to develop an appreciation for the process of research as practiced by contemporary professional geographers. Topics covered include formulating research problems, reviewing and critiquing published literature, developing and executing a research design, and completing a research project or proposal. Secondary objectives include familiarizing students with methods associated with the presentation of research results, *i.e.*, written and oral presentations, and becoming professionally aware.

## **KNOWLEDGE OUTCOMES**

**Develop** a meaningful and theoretically significant research problem statement and review literature relevant to this research problem.

**Demonstrate understanding** of the components of research design including problem definition, theory, literature review, methodology, analysis, and presentation of results.

## **SKILLS OUTCOMES**

**Write** a review of theory and literature based on a problem statement.

**Complete** a proposal to undertake a doctoral dissertation or master's thesis.

## **REQUIRED MATERIALS**

- (1) Kenzer, ed., *On Becoming a Professional Geographer*
- (2) A course readings packet distributed by the instructor

## **EVALUATION AND GRADING POLICIES**

I will evaluate your performance and assign grades based on two major areas of work in this course. First, I will assess your ability to communicate advanced material through class participations in weekly research article discussions, and in-class presentation of your proposed research project. Second, several written assignments are also used to evaluate your final grade. All students are expected to prepare assignments by the scheduled time. Late assignments (presentation or project) will have their grade lowered 10 percent of the maximum points for that assignment per class day late. I will endeavor to grade projects within a week of their submission. There are NO exams in this course, and thus NO final exam date. However, the “final” proposal will be due to me at the scheduled final exam time for this class, May 8, 3:00pm – 5:30pm. The “final” proposals you produce in this class will still need to be amended with changes requested by your research advisor before they are officially accepted by the department.

There is a maximum of 400 points for all of the discussion, presentation, project, and critique activities. The basis for grading will be as follows:

<u>Assignment</u>	<u>Points (Percent of Total)</u>
Class Contributions	40 (10%)
Curriculum Vitae	20 (5%)
Area of Specialization Statement	20 (5%)
Literature Review Outline	20 (5%)
Literature Review	60 (15%)
Critique of Colleague's Lit Review	20 (5%)
Problem Statement	20 (5%)
Critique of Colleague's Prob. State.	20 (5%)
Draft Proposal	60 (15%)
Critique of Colleague's Draft Prop.	20 (5%)
Oral Presentation of Proposal	40 (10%)
"Final" Proposal	60 (15%)
<b>TOTAL</b>	<b>400 (100%)</b>

The final grades will be determined based on the following rules (grades will not be posted):

A	≥90% (≥360 points)
B	≥80% and <90% (320 – 359 points)
C	≥70% and <80% (280 – 319 points)
D	≥60% and <70% (240 – 279 points)
F	<60% (< 239 points)

### **CLASSROOM AND ATTENDANCE POLICIES**

Good attendance in the class is key to your success in this course. First, the student discussions in class will require knowledge from previous weeks. Second, the individual writing projects will require a deep familiarity with class material.

The department of geography typically will not allow more than 2 missed days per semester for graduate level classes, and that standard will hold for this class because it only meets once per week. This maximum can only be exceeded under dire circumstances that I have approved. If you must miss class because of an illness, a personal emergency, or some other extenuating circumstance, please contact me as soon as possible so I can make alternative arrangements for you (this is key). Of course, good attendance means more than just showing up for class. Please read and adhere to the policy on classroom etiquette that appears below. These codes of conduct will allow everyone to participate equally as learners. Thank you for your cooperation.

In the Department of Geography, instructors strive to create an atmosphere of mutual trust and respect in which learning, debate, and intellectual growth can thrive. Creating this atmosphere, however, requires that instructors and students work to achieve a classroom in which learning is not disrupted. At the most basic level, this means that everyone should attend class, be prepared with readings and assignments completed, and that students pay attention. This means no conversations with friends, reading the newspaper, coming late, or leaving early. Such behavior is disruptive to the instructor and to your fellow classmates.

## STUDENTS WITH DISABILITIES

Students having special needs/disabilities (as documented by the Office of Disability Services) that will require compensatory arrangements must contact the instructor no later than the fourth class period to discuss specific arrangements and logistics. Students who have not already done so will be required to contact the Office of Disability Services located at LBJ 5-5.1 (512-245-3451). Texas State is dedicated to providing these students with necessary academic adjustments and auxiliary aids to facilitate their participation and performance in the classroom.

## TEXAS STATE ACADEMIC HONESTY POLICY

Learning and teaching take place best in an atmosphere of intellectual fair-minded openness. All members of the academic community are responsible for supporting freedom and openness through rigorous personal standards of honesty and fairness. Plagiarism and other forms of academic dishonesty undermine the very purpose of the university and diminish the value of an education. Specific sanctions for academic dishonesty are outlined in the *Texas State Student Handbook*.

## SCHEDULE BY WEEK

<u>Date</u>	<u>Readings Discussed</u>	<u>Lecture Topic</u>	<u>Assignments Due</u>
Jan 23	NONE	Intro to Research Design, CVs, Area of Specialization	NONE
Jan 30	Hornbeck, Fonstad CV, Adams CV, Fonstad Statement	Geography as a Research Discipline	Curriculum Vitae
Feb 6	Pattison, Taafe, Chappell, NRC Chap 3, Cutter et al.	Communication of Research	Area of Specialization Statement
Feb 13	Ford, Parker et al., de Souza, Gopen and Swan,	Communication of Research II	NONE
Feb 20	Butler, Bourne, Hanson (1)	Focussing on the Research Question	Literature Review Outline
Feb 27	Borgman, Wolman (1), Gould	How to Write vs. the Process of Writing	Literature Review
Mar 6	Brunn, Loyd, Fonstad Proposal, Graf Proposal	How to Write vs. the Process of Writing II	Critique of Colleague's Lit Review
Mar 13	NONE	SPRING BREAK -- NO CLASS	NONE
Mar 20	Staeheli & Mitchell,	Philosophical Approaches in Geographical Research	Problem Statement
Mar 27	Murphy, Colwell, Goodchild, Hanson (2), Wolman (2), Tuan	Philosophical Approaches in Geographical Research II	Critique of Colleague's Problem Statement
Apr 3	Liverman, Skole, Shepard, Rhoads, Kwan, Mitchell	Hypotheses, Data, Methods, Ethics in Research	NONE
Apr 10	Rutherford and Lloyd, Wilkerson	More on Methods of Analysis	NONE
Apr 17	Dunham et al., Nickels and Day	Analysis of Theses and Disertations	Draft Proposal
Apr 24	Conyers, Bean, Schmiedeskamp, Resler, Zhou	Analysis of Theses and Disertations II	Critique of Colleague's Draft Proposal
May 1	NONE	Oral Presentations of Proposed Research	Oral Presentation
May 8	NONE	Open Period (for Presentations if Necessary)	"Final" Proposal

## REFERENCE LIST

ABBREVIATION	REFERENCE	LOCATION
Adams CV	Adams, J.K. 2005. Curriculum Vitae. Feb. 1, 2005	Packet
Bean	Bean, L.L. 2002. Bridging hazards geography and political geography : a borderland vulnerability framework with a case study along the United States – Mexico border. <i>Unpublished Doctoral Dissertation, Texas State University.</i>	In Class
Bourne	Bourne, L.S. 2000. On writing and publishing in human geography: some personal reflections. In <i>On Becoming a Professional Geographer</i> , ed. M.S. Kenzer, 100-112. Caldwell, NJ: The Blackburn Press.	Text
Borgman	Borgman, L.E. 1998. The zen of research. <i>Journal of Geoscience Education</i> 46: 346-353.	Packet
Brunn	Brunn, S. D. 1988. The manuscript review process and advice to prospective authors. <i>Professional Geographer</i> 40:8-14.	Packet
Butler	Butler, D.R. 2000. Conducting research and writing an article in physical geography. In <i>On Becoming a Professional Geographer</i> , ed. M.S. Kenzer, 88-100. Caldwell, NJ: The Blackburn Press.	Text
Chappell	Chappell, Jr., J.E. 2000. Relations between geography and other disciplines. In <i>On Becoming a Professional Geographer</i> , ed. M.S. Kenzer, 17-31. Caldwell, NJ: The Blackburn Press.	Text
Colwell	Colwell, R. 2004. The new landscape of science: a geographic portal. <i>Annals of the Association of American Geographers</i> 94(4): 703-708.	Packet
Conyers	Conyers, M.M. 2003. A regional evaluation of Manning's roughness estimates in streams of south-central Texas. <i>Unpublished Masters Thesis, Texas State University.</i>	In Class
Cutter et al.	Cutter, S.L., Golledge, R., Graf, W.L. 2002. The big questions in geography. <i>Professional Geographer</i> 54(3): 305-317.	Packet
de Souza	de Souza, A. R. 1988. Writing matters. <i>Professional Geographer</i> 40:1-3.	Packet
Dunham et al.	Dunham, S., Fonstad, M.A., Anderson, S.A., Czajkowski, K. 2005. Using multi-temporal satellite imagery to monitor the response of vegetation to drought in the Great Lakes region. <i>GIScience and Remote Sensing</i> 42(3): 185-201.	Packet
Fonstad CV	Fonstad, M.A. 2006. Curriculum Vitae. Updated January 15, 2006.	Packet
Fonstad Proposal	Fonstad, M.A. 2001. A new photogrammetric method for measuring historic three-dimensional river channel change. Unpublished Research Proposal to the REP Grant program at Southwest Texas State University.	Packet
Fonstad Statement	Fonstad, M.A. 1998. Area of Specialization Statement. <i>Arizona State University Geography Research Design class materials.</i>	Packet
Ford	Ford, L. 2000. Presenting with Pizazz: oral traditions in geography. In <i>On Becoming a Professional Geographer</i> , ed. M.S. Kenzer, 32-41. Caldwell, NJ: The Blackburn Press.	Text
Goodchild	Goodchild, M.F. 2004. GIScience, geography, form, and process. <i>Annals of the Association of American Geographers</i> 94(4): 709-714.	Packet
Gopen and Swan	Gopen, G.D. and Swan, J.A. 1990. The science of science writing. <i>American Scientist</i> 78: 550-558.	Packet
Gould	Gould, G. 1999. Trying to be honest. In <i>Becoming a Geographer</i> , 205-234. Syracuse, NY: Syracuse University Press.	Packet
Graf Proposal	Graf, W. L. 1997. Downstream Geomorphic Impacts of Large Dams on American Rivers. Unpublished Research Proposal to the Geography and Regional Science Program of the National Science Foundation.	Packet
Hanson (1)	Hanson, S. 1988. Soaring. <i>Professional Geographer</i> 40:4-7.	Packet
Hanson (2)	Hanson, S. 2004. Who are "we"? An important question for geography's future. <i>Annals of the Association of American Geographers</i> 94(4): 715-722.	Packet
Hornbeck	Hornbeck, D. 2000. So...you wanna go to graduate school? In <i>On Becoming a Professional Geographer</i> , ed. M.S. Kenzer, 10-16. Caldwell, NJ: The	Text

	Blackburn Press.	
Kwan	Kwan, M. 2004. Beyond difference: from canonical geography to hybrid geographies. <i>Annals of the Association of American Geographers</i> 94(4): 756-763.	Packet
Liverman	Liverman, D. 2004. Who governs, at what scale and at what price? Geography, environmental governance, and the commodification of nature. <i>Annals of the Association of American Geographers</i> 94(4): 734-738.	Packet
Loyd	Loyd, B. 2000. Not-so-mysterious secrets of publishing journal articles. In <i>On Becoming a Professional Geographer</i> , ed. M.S. Kenzer, 148-159. Caldwell, NJ: The Blackburn Press.	Text
Mitchell	Mitchell, D. 2004. Geography in an age of extremes: a blueprint for a geography of justice. <i>Annals of the Association of American Geographers</i> 94(4): 764-770.	Packet
Murphy	Murphy, A.B. 2004. Centennial forum: where we have come from and where we are going. <i>Annals of the Association of American Geographers</i> 94(4): 701-702.	Packet
Nickels and Day	Nickels, C.R. and Day, F.A. 1997. Depopulation of the rural great plains counties of Texas. <i>Great Plains Research</i> 7: 225-250.	Packet
NRC Chap 3	National Research Council. 1997. Geography's perspectives. In <i>Rediscovering Geography: New Relevance for Science and Society</i> , 28-46. Washington, D.C: National Academy Press.	Packet
Parker et al.	Parker, D.C., Manson, S.M., Janssen, M.A., Hoffmann, M.J., Deadman, P. 2003. Multi-agent systems for the simulation of land-use and land-cover change: a review. <i>Annals of the Association of American Geographers</i> 93(2): 314-337.	Packet
Pattison	Pattison, W. 1964. The Four Traditions of Geography. <i>Journal of Geography</i> 63: 211-216.	Packet
Resler	Resler, L.M. 2004. Conifer establishment sites on a periglacial landscape, Glacier National Park, Montana. <i>Unpublished Doctoral Dissertation, Texas State University.</i>	In Class
Rhoads	Rhoads, B.L. 2004. Whither physical geography? <i>Annals of the Association of American Geographers</i> 94(4): 748-755.	Packet
Rutherford and Lloyd	Rutherford, D. and Lloyd, W.J. 2001. Assessing a computer-aided instructional strategy in a world geography course. <i>Journal of Geography in Higher Education</i> 25(3): 341-355.	Packet
Schmiedeskamp	Schmiedeskamp, C.W. 2005. Assessment of burn severity of large wildfires via multi-temporal Landsat imagery analysis and cellular automata modeling. <i>Unpublished Masters Thesis, Texas State University.</i>	In Class
Shepard	Shepard, E. 2004. Practicing geography. <i>Annals of the Association of American Geographers</i> 94(4): 744-747.	Packet
Skole	Skole, D.L. 2004. Geography as a great intellectual melting pot and the preeminent interdisciplinary environmental discipline. <i>Annals of the Association of American Geographers</i> 94(4): 739-743.	Packet
Staeheli & Mitchell	Staeheli, L.A. and Mitchell, D. 2005. The complex politics of relevance in geography. <i>Annals of the Association of American Geography</i> 95(2): 357-372.	Packet
Taafe	Taafe, E. 1974. The spatial view in context. <i>Annals of the Association of American Geographers</i> 64: 1-16.	Packet
Tuan	Tuan, Y.F. 2004. Cultural geography: glances backward and forward. <i>Annals of the Association of American Geographers</i> 94(4): 729-733.	Packet
Wilkerson	Wilkerson, F.D. 1995. Rates of frost heave and surface rotation of periglacial frost boils in the White Mountains, California. <i>Physical Geography</i> 16(6): 487-502.	Packet
Wolman (1)	Wolman, M.G. 1995. Play: the handmaiden of work. <i>Earth Surface Processes and Landforms</i> 20: 585-591.	Packet
Wolman (2)	Wolman, M.G. 2004. The more things change. <i>Annals of the Association of American Geographers</i> 94(4): 723-728.	Packet

Zhou	Zhou, X. 2000. Geographic concentrations of lung cancer mortality in Texas and their relationships to environmental and socioeconomic conditions. <i>Unpublished Doctoral Dissertation, Texas State University.</i>	In Class
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### **ABOUT THE INSTRUCTOR**

The instructor is Mark A. Fonstad, assistant professor of geography. He is a specialist in spatial and hydrological analysis of river systems, theoretical geomorphology, and applied remote sensing. Mark received his Ph.D. in Geography from Arizona State University (2000) where he researched mountain fluvial systems and the prediction of channel change in New Mexico. For the past five years, Mark has directed the field research on channel morphology, watershed hydrology, and the remote sensing of rivers in Yellowstone National Park.



\* A member of the Texas State University System