

GEOG/ENVS 4200: Research Methods in Geography & Environmental Studies

Fall 2015, CRN# 82413, 3 Credit Hours,
Mondays, Wednesdays, and Fridays (Hybrid Course)*, 1:00 PM to 1:50 PM, in Science 214
First Day of Classes: August 17
Last Day of Classes: December 7

Instructor Info:

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Office: Social Science Building 4051B

Fall Semester 2015 Office Hours: Mondays and Wednesdays 10:00 AM to 12:00 PM (or by appointment).

I encourage you to email me as I will check my email several times each week-day to answer questions, clarify lectures, assignments, and to make appointments. If you want a quick response, please email me directly, rather than through D2L because I have faster access to email.

Textbook and Additional Readings:

An Introduction to Scientific Research Methods in Geography and Environmental Studies, 2013, second edition, by Daniel R. Montello and Paul C. Sutton, from Sage Publications, ISBN: 9781446200759.

Additional readings may also be assigned throughout the semester as handouts in class or PDF files, and will be made available on D2L.

Course Description:

This course is designed to prepare students for scientific research in geography, environmental fields, and related disciplines. It introduces students to a variety of spatial and environmental research concepts, approaches, methods and techniques. This course guides students through aspects of scientific research, from generating research ideas, choosing a research topic, literature review, methodology design, data collection, data analysis, drawing conclusions, and presentation of research results. Students develop a research proposal and present it to the class. This course is cross-listed as GEOG 4200 and ENVS 4200 and may count toward the Geography or Environmental Analysis and Sustainability degree. **Prerequisites:** 60 credit hours and SCI 1101 or SCI 1102 or GEOG 1112 or GEOG 1113 or CHEM 1211 and CHEM 1211L.

* Note: According to the KSU Distance Learning Center, "Hybrid courses at KSU are 50% on-campus classroom based courses, and 50% distance education. Hybrid courses replace one on-campus classroom meeting per week with distance education pedagogy and technologies. Students can expect out of class activities that are conducted via the Learning Management System. These may include discussion activities, virtual team meetings, wiki and blog activities, and self-guided assessments and evaluations." Therefore, we will meet in-person on Mondays and Wednesdays. In place of Friday meetings, there will be out-of-class assignments available via the D2L course site online that can be completed on your own time each week.

Learning Objectives:

Students who successfully complete this course should be able to:

1. Understand basic geographic/environmental research concepts and methods.
2. Critically review geographic/environmental research methods in geography/environmental literatures.
3. Design research projects in their fields of interest.
4. Apply research methods to their own research projects.
5. Develop oral and writing skills to present their research and findings.

Grading:

Grade Component	Points	Percent
Participation	50	10%
Five Reading Quizzes	50	10%
Written Assignments and Proposal Components	150	30%
Research Proposal	150	30%
Proposal Presentation	50	10%
Proposal Peer Review	50	10%
COURSE TOTAL	500	100%

Participation (10 percent of total course grade):

Students are expected to attend all lectures and class discussions, complete all written assignments and proposal components, and complete assigned readings by the beginning of the week in which the reading is assigned (refer to schedule presented in this syllabus) in order to actively participate in class discussions each week. Class attendance and participation makes up 10% of the total course grade.

Textbook Reading Quizzes (10 percent of total course grade):

In order to be prepared for class discussions and to adequately participate in class, students must read the corresponding chapters in the textbook (and any other assigned readings as announced) by the beginning of the week in which the reading is assigned (see syllabus schedule below). Five reading quizzes will occur randomly throughout the semester. The five textbook reading quizzes, worth 10 points each, account for 10% of the total course grade. Quizzes may either be administered in class or through the D2L course site online at the discretion of the instructor.

Written Assignments and Proposal Components (30 percent of total course grade):

Throughout the semester, students will complete several written assignments that apply concepts from readings and class discussions and also form the components and building blocks of their research proposal papers that will be due by the end of the course. These specific written assignments (see week-by-week schedule below for due dates) include developing potential research topics, developing specific research questions, constructing a literature review, and describing the study area, methodology, and potential data sources. Additional impromptu assignments/exercises may take place in-class or online through D2L as part of a particular week's discussion theme. All assignments and proposal components will be submitted electronically on the D2L course site. The written assignments are 30% of the total course grade.

Research Proposal (30 percent of total course grade):

Students will spend time throughout the course developing a research proposal in a particular field of geography or environmental studies based on their research interests. The various components of the research proposal (see "written assignments" above) will be due at different points throughout the

semester (see syllabus week-by-week schedule below for due dates). The final research proposal will also go through a peer review with other students in the class. However, the full research proposal will be graded only once—at the end of the semester. More detailed requirements for the proposal are described below. The final research proposal makes up 30% of the total course grade. It is due on the last day of class.

Structure of Research Proposal:

In general, the research proposal should have the following or similar components (not necessary to follow this structure, but should be logical). The proposal should be organized into sections and subheadings.

1. Introduction: an overview of your research question(s).
2. Background: Background information about your topic to help readers understand your research concepts, question(s), and context.
3. Literature Review: You should read at least 10 literatures (i.e., peer-reviewed academic journal articles, book chapters, or other scholarly work) relevant to your research questions and methods. They may be peer-reviewed journal papers, book chapters, or books you can get from the library and electronic databases searchable through the Library or Google Scholar. The literature review is a summary of the previous studies relevant to your area of research and research question(s). You should discuss the differences between your proposed study and the previous studies, the limitations in the previous studies, any improvements your study may make, and why your study is needed to contribute or fill a gap in the particular area of knowledge.
4. Research Objectives: Provide detailed research purposes and questions or any hypotheses you want to test.
5. Study Area: Most geographic topics are for a specific place, area, or region. Describe the information relevant to the research questions in the study area (physical, social, historical, environmental, cultural, etc.).
6. Data Sources and Methodology: Clearly describe how you will collect the data and the methods you plan to use to explore and interpret the data and address the research questions. A flow chart may help you organize the methodology and make it easier to understand.
7. Expected Results: Describe expected results and how they can answer the research questions and hypotheses. Any scientific, social, and practical contributions your research may make.
8. References: List the literatures in any standard and consistent bibliographic format, such as APA, MLA, or Chicago Style. The key is to choose one style and remain consistent. If you don't have any idea of a particular reference citation format, look at one of the peer-reviewed journal articles you reference in your proposal and follow its particular citation and reference format.

Length:

5 to 10 pages of typed text, excluding references and visuals/figures/tables, using 12 point times new roman font, single-spaced, with 1-inch margins.

Grading:

The final research proposal will be graded on the description and organization of research concepts and methods, writing (spelling, structure, style, grammar), and the feasibility of the proposed study.

Research Proposal Presentation (10 percent of total course grade):

After completing the draft of the research proposal, students will have the opportunity to present the most important aspect(s) of the research proposal to the class and answer questions from the class in

less than 10 minutes. The proposal presentation must be turned into the instructor by the date of the presentation in class. The presentation counts for 10% of the total course grade.

Research Proposal Peer Review (10 percent of total course grade):

After students turn in a draft of their proposals, the instructor will distribute your proposal draft to another student in the class. Each student, from the perspective of an editor reviewing a draft manuscript for publication, must read and review one other student’s proposal and send comments back to the author and to the instructor. The author may send the responses back to the reviewer and the instructor and make necessary revisions or respond to the feedback during the presentation. The peer review will be graded based on how you review other students’ proposals and how you respond to the comments on your own proposal. This part makes up 10% of the final course grade.

Tentative Class Schedule (Please read the designated reading for a particular week by the beginning of that week to be able to fully participate in class discussions):

Week	Required Reading, General Topics for the Week, and Assignment(s) Due
Week 1 August 17-21	August 17 is First Day of Classes for Fall Semester 2015. Chapter 1: Introduction: A Scientific Approach to Geography and Environmental Studies Overview and introduction to the class, use of D2L for assignment submission and interaction with class.
Week 2 August 24-28	Chapter 2: Fundamental Research Concepts How to generate research ideas and questions August 26: Guest Speaker: Dr. Amy Buddie, Associate Director for Graduate Student Support and Undergraduate Research/Creative Activity at KSU
Week 3 August 31- September 4	Chapter 3: Scientific Communication How to get literatures from the library and electronic journal databases September 2: Guest speaker from KSU Sturgis Library. Proposal Component Due September 4: List of three potential research topics for your proposal
Week 4 September 7-11	Chapter 4: Data Collection in Geography and Environmental Studies: Overview How to describe your research questions September 7: Labor Day Holiday, No Class Assignment Due September 11: Literature Search and Evaluation
Week 5 September 14-18	Chapter 5: Physical Measurements How to give background information and perform literature review September 14: Guest Speaker: Dr. Leslie Kern, Visiting Fulbright Scholar Proposal Component Due September 18: Description of research questions for your proposal
Week 6 September 21-25	Chapter 6: Behavioral Observations and Archives Assignment Due September 25: Data Sources
Week 7 September 28- October 2	Chapter 7: Explicit Reports: Surveys, Interviews, and Tests Assignment Due October 2: Survey Questionnaire Design September 29: KSU Education Abroad Fair, 10:00 AM to 3:00 PM, Carmichael Student Center University Rooms

Week 8 October 5-9	Chapter 8: Experimental and Nonexperimental Research Designs October 7 is last day to withdraw without academic penalty Proposal Component Due October 9: Proposal background, literature review, and research objectives
Week 9 October 12-16	Chapter 9: Sampling Important data sources in geography and environmental studies
Week 10 October 19-23	Chapter 10: Statistical Data Analysis Assignment Due October 23: Statistics Data Sources
Week 11 October 26-30	Chapter 11: Data Display: Tables, Graphs, Maps, Visualizations Proposal Component Due October 30: Proposal study area, data sources, and methodology
Week 12 November 2-6	Chapter 12: Reliability and Validity
Week 13 November 9-13	Chapter 13: Information Technologies in Research Geographic Information Systems (GIS) Proposal Component Due November 13: Draft of your research proposal sent to the instructor.
Week 14 November 16-20	Chapter 14: Ethics in Scientific Research In-class discussions about initial proposal reviews, the peer-review process, and presenting proposals. Assignment Due November 20: Peer Review of Classmates' Research Proposals November 15-21: Geography Awareness Week: 2015 Theme is "Explore! The Power of Maps." For more info, see: http://education.nationalgeographic.com/programs/geographyawarenessweek/ November 18: GIS Day. For more info, see: http://www.gisday.com/
Week 15 November 23-27	Fall Break: No Classes. Happy Thanksgiving!
Week 16 November 30-December 4	Proposal Presentations in Class
Week 17 December 7	December 7 is last day of class for Fall Semester 2015. Proposal Presentations in Class (if not everyone presented the previous week) Due December 7: Final Research Proposal

Academic Integrity:

Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs and is also available here:

<http://web.kennesaw.edu/scail/>

Section II of the Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious or intentional misuse of computer facilities and/or service,

and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the University Judiciary Program, which includes either an “informal” resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct’s minimum one semester suspension requirement.

*Note on Plagiarism: Please do not copy any sentences or paragraphs directly from books, journal articles, lectures, newspaper articles, websites, or other people’s work. This kind of action is considered as plagiarism. Please write in your own words or using appropriate citations and give credit and attribution to other people’s work and ideas. Please give the source of each citation, and list it in the References section of your paper. For more information, please see: **Why is cheating/plagiarism wrong and what will happen if I’m accused of academic misconduct?:***

<http://web.kennesaw.edu/scai/content/why-cheatingplagiarism-wrong-and-what-will-happen-if-i%E2%80%99m-accused-academic-misconduct>

Other information:

Office of the Registrar: <http://www.kennesaw.edu/registrar/policies/>

ADA Statement: http://www.kennesaw.edu/stu_dev/dsss/dsss.html. Any student with a documented disability needing academic adjustments is requested to notify the instructor as early in the semester as possible. Verification from KSU Student Disability Services is required. All discussions will remain confidential.

KSU Library Services:

The KSU Library System assists all students, faculty and staff with their research, including using library databases to find articles, accessing books and other materials in our catalog, and for specialized research needs. Librarians are available for in-person walk-up assistance at library help desks, one-on-one research appointments, and 24x7 via library chat. For more information on library locations, hours, and how to access our services please visit <http://library.kennesaw.edu/>.

Additional Research Resources:

- Research Guides from KSU Sturgis Library: <http://libguides.kennesaw.edu/cat.php?cid=79060>
- Geography Research Guide from KSU Sturgis Library: <http://libguides.kennesaw.edu/geography>
- Galileo Scholar, University System of Georgia. Discover articles, books, media, and more from across the University System of Georgia: <http://www.galileo.usg.edu/scholar/kennesaw/search/>
 - Galileo Scholar, Geography subject guide: <http://www.galileo.usg.edu/scholar/kennesaw/subjects/geography/articles-databases/>
 - Galileo Scholar, Environmental Science Collection (ProQuest): <http://www.galileo.usg.edu/scholar/databases/zuec/>
- Google Scholar: <https://scholar.google.com/>
 - When searching Google Scholar on a KSU campus computer, you should be able to easily access full-text scholarly journal articles for the many journals to which KSU has a subscription. In many such cases, you should be able to click a link directly to the PDF file that appears on the right side of the search results page if the PDF article is available. When using Google Scholar off of KSU’s network, you may not always be able to access full text of journal articles.
- Council on Undergraduate Research: http://www.cur.org/about_cur/

- National Conference on Undergraduate Research: http://www.cur.org/ncur_2016/

Optional Supplemental Readings:

- Bailey, Carol A. 1996. *A Guide to Field Research*. Thousand Oaks, Calif.: Pine Forge Press.
- Clifford, Nicholas and Valentine, Gill. 2003. *Key Methods in Geography*. Sage Publications.
- Cooper, Harris M. 1998. *Synthesizing Research: a guide for literature reviews*. Sage Publications.
- Cutter, Susan L., Reginald Golledge, and William L. Graf. 2002. "The Big Questions in Geography." *Professional Geographer* 54, 3: 305-317.
- Drew, C.J., M.L. Hardman, and A.W. Hart. 1996. *Designing and Conducting Research*. Needham Heights: Allyn and Bacon.
- Flowerdew, Robin and David Martin. 2005. *Methods in Human Geography: A Guide for Students Doing a Research Project*. Prentice Hall.
- Hay, Iain. 2005. *Qualitative Research Methods in Human Geography*. Oxford University Press.
- Hult, Christine. 1996. *Researching and Writing in the Social Sciences*. Boston: Allyn and Bacon.
- Locke, Lawrence F., Spirduso W., and Silverman, Stephen J.. 2007. *Proposals that Work*. Sage Publications.
- Moore, Nick. 2000. *How to do Research: The Complete Guide to Designing and Managing Research Projects*, 3rd ed. London: Library Association Publishing.
- National Academies. 2009. *On Being a Scientist: A Guide to Responsible Conduct in Research*. Washington, DC: National Academies Press.
- Northey, Margot and Knight, David. 2007. *Making Sense: A Student's Guide to Research and Writing in Geography and Environmental Sciences*. Oxford University Press.
- Rogerson, Peter A. 2006. *Statistical Methods for Geography: A Student's Guide*. 2nd edition. Sage Publications.
- Robson, Colin. 2002. *Real World Research: A Resource for Social Scientists and Practitioner-Researchers*, 2nd ed. Oxford, UK: Blackwell.
- Rodrigues, Dawn, and Raymond J. Rodrigues. 2003. *The Research Paper: A Guide to Library and Internet Research*, 3rd ed. Upper Saddle River, NJ: Prentice Hall.
- Ruane, Janet. 2005. *Essentials of Research Methods: A Guide to Social Science Research*. Oxford: Blackwell.
- Schloss, Patrick J., and Maureen Smith. 1999. *Conducting Research*. Merrill: Upper Saddle River.
- Skloot, Rebecca. 2011. *The Immortal Life of Henrietta Lacks*. New York: Broadway Paperbacks.
- Williams, Joseph. 2002. *Style: Ten Lessons in Clarity and Grace*. New York: Harper.