1. Writing Plan Cover Page

*Please fill in the gray areas on this form.*

October 18, 2013

☐ First Edition of Writing Plan


Geography

<table>
<thead>
<tr>
<th>WEC Unit Name</th>
<th>CLA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography, Environment, and Society</td>
<td>CLA</td>
</tr>
<tr>
<td>Department</td>
<td>College</td>
</tr>
<tr>
<td>Steven Manson</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>WEC Faculty Liaison (print name)</td>
<td>Title</td>
</tr>
<tr>
<td><a href="mailto:manson@umn.edu">manson@umn.edu</a></td>
<td>612 625 4577</td>
</tr>
</tbody>
</table>

Email

<table>
<thead>
<tr>
<th>Phone</th>
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<tbody>
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<td>612 625 4577</td>
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</table>

Writing Plan ratified by Faculty

*Note: This section needs to be completed regardless of Writing Plan edition.*

Date: October 11, 2013

If Vote: 15 / 15

Process by which Writing Plan was ratified within unit (vote, consensus, other- please explain):

Faculty ratified plan via unanimous vote.
### 2. Unit Profile: Geography, Environment, and Society

*Please fill in the gray areas on this form.*

#### Number of Tenured and Tenure-Track Faculty:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tr>
<td>Professors</td>
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<td>Associate Professors</td>
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<td>Assistant Professors</td>
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#### Major(s)

*Please list each major your Unit offers:*

<table>
<thead>
<tr>
<th>Major(s)</th>
<th>Total # students enrolled in major as of Fall 2013</th>
<th>Total # students graduating with major AY 12-13</th>
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<tr>
<td>Geography</td>
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<td>Urban Studies</td>
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<td><strong>23</strong></td>
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#### WEC Process

<table>
<thead>
<tr>
<th>WEC Process</th>
<th>Date</th>
<th># participated</th>
<th># invited</th>
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<tbody>
<tr>
<td>WEC meets w/ exec committee</td>
<td>Spring/Summer 201</td>
<td>6</td>
<td>6</td>
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<td>WEC/GES ratings of writing</td>
<td>Summer 201</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
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<td>Oct 4 2013</td>
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<td>6</td>
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<tr>
<td>Undergrad committee meets on plan</td>
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<tr>
<td>Faculty meets on plan</td>
<td>Oct 11 2013</td>
<td>15</td>
<td>17</td>
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<tr>
<td>WEC provides penultimate feedback</td>
<td>Oct 18 2013</td>
<td>na</td>
<td>na</td>
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<tr>
<td>Plan filed with CLA</td>
<td>Oct 22 2013</td>
<td>na</td>
<td>na</td>
</tr>
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</table>
3. Signature Page

Signatures needed regardless of Writing Plan edition. Please fill in the gray areas on this form.

Electronic signatures may be submitted in lieu of this page. If this page is submitted as a hard copy, please include a print out of the electronic signature chain here.

WEC Faculty Liaison

Steven Manson
WEC Faculty Liaison (print name)

Signature

October 20, 2013
Date

Associate Professor
Title

Department Head/Chair

Abdi Samatar
Print Name

Signature

October 21, 2013
Date

Chair
Title

Associate Dean

Jennifer Windsor
Print Name

Signature

November 15, 2013
Date

Associate Dean
Title

For College of Liberal Arts units only:

CLA - Curriculum, Instruction, and Advising Committee approved Writing Plan on

Date

Print Name
Title

Signature
Date
Geography, Environment, and Society Writing Plan
Third revision (Fall 2013)

**Rationale.** The Writing-Enriched Curriculum Project (WEC) was launched in 2007 to develop a process for infusing writing and writing instruction into the university’s undergraduate curricula. The primary vehicle by which WEC aids departments is helping them develop writing plans and attendant activities. The Department of Geography, Environment, and Society (GES) encompasses a broad array of topics and sub-fields, which translates into a tremendous variety in written projects. In the face of such diversity, we created a writing plan that aids students, staff, and faculty across myriad forms of undergraduate learning.

**Changes.** We made minor changes in moving from the second to third edition of the plan.
- We modified several of the original twelve desired writing abilities in response to WEC’s Summer 2013 rating of upper-division writing of graduating majors and to better fit with student experiences in key courses (Section 2). We also made wording changes throughout this section and restructured the writing abilities, including nesting some within others, to better match our writing style guide and experience of the broad range of student writing projects in GES.
- We updated our implementation plan to reflect changes to the Geography BA and BS, which should go live in Spring 2014 (Section 3). Majors may choose from a greater array of courses with a writing component than before and we now offer a more uniform senior project experience across GEC subprograms. These WI courses and the senior project are central to our writing plan and these changes in the major have the side effect of giving students more writing opportunities.
- We updated our assessment of writing (Section 4) to reflect changes desired writing abilities (Section 2).
- We seek WEC support for a research assistant who will help revise and expand five elements of our plan implementation (Section 5): writing guide, exemplar projects, student information brochure about the writing plan, preparatory workshops for senior projects, and pathways to the senior project documentation.
- We added Sections 1 and 7 to conform to the writing plan template.

**History.** The department participated in the initial WEC process in Fall 2008. GES submitted the first edition of the Writing Plan in Spring 2009 and the second edition in Spring 2010. In summer of 2010, WEC conducted a rating session on senior project papers (3985W). WEC performed another rating in summer 2013 on a range of papers from 3000-level courses including the senior project seminar. The faculty reviewed these ratings and the effects of BA/BS restructuring and made necessary changes to the Writing Plan for the third edition.
1.0 Discipline-specific writing characteristics

The Department of Geography, Environment, and Society (GES) encompasses a broad array of topics and sub-fields, which translates into a tremendous variety in written projects. Our plan reflects the fact that GES encompasses several programs: Geography or GEOG; Urban Studies or URBS; Biology, Society and Environment or BSE. These programs each, in turn, span a very broad array of subfields. Indeed, many students are interested in GES specifically because the courses offered by the faculty who study and draw connections among a range of different systems. Students across all programs focus on the spatial aspects of human existence and look at issues such as development, sustainability, poverty, cities, and health. Physical geographers and some BSE students study the natural world, including patterns and processes of climate, land forms, water, vegetation, and animals. Many students study both human activity and natural systems together, looking at topics such as hazards, environmental degradation, and natural resource use. GES students use many approaches, ranging from personal interviews and archival research to digital technologies like Geographic Information Systems (GIS) to understand the world.

Consider some examples drawn from various sub-fields.

- Many GES papers will offer analyses that rely on a standard structure: introduction, background, data, methods, result, and discussion. The coherence of the argument lies in how well the paper can logically develop the argument through this form. The introduction defines the question or problem. The background section describes the theories or knowledge currently employed to address the question or problem and sets up the rest of the paper. It may present the paper as adjudicating between two theories or answering an unresolved question posed in the literature. The data and methods sections describe the observations and approaches needed to affirmatively answer the question, ideally taking their cue from the background section to justify why given data and methods are employed. The results section describes what the data and methods yielded and the discussion applies these to answering the question and positions these findings within the larger field.

- Critical human geography papers may focus on a qualitative analysis based on ethnographic fieldwork and/or close reading of key “texts” (e.g., film, policies, archival documents, photography). The introduction poses the larger thesis or issue while the background will address how existing theories and approaches conceive of or treat the subject matter (e.g., ‘how is race constructed?’ or ‘what is nature?’) The paper can then offer a framework for presenting the basic data or media being examined and describe how a given theory or approach is suited to ‘critically read’ or analyze the media (e.g., a feminist or Marxist examination). Effective papers offer arguments that offer a new reading or insight into the basic matter. In addition, or perhaps instead, they may demonstrate how, compared to other theories, the approach employed offers newer, better, or deeper insight and understanding of the subject.

- Literature reviews from any subfield seek to deliver a comprehensive analysis of the state of a given field. A review answers a series of questions: Where did the problem or issue come from? What is already known about the issue? What have other people done to approach this issue? Why should anyone care? Beyond these specific questions, the
review should clearly and succinctly summarize the major authors, contributions, and themes in the field. It should create a mental architecture, where the writer creates their own typology, or borrows and expands on a well-known one. It should contextualize each contribution and relate them to one another, including lending historical context where useful, recounting debates, and keeping track of the rise and fall of theories. It should critically evaluate where each contribution has relative advantages and disadvantages. How does the student find them useful or not useful? Importantly, they must justify their critique and must address ideas, not the authors directly.

- Policy-oriented papers, found across GES programs but particularly in BSE and URBS, will examine a problem and its existing political dimensions and, ideally, offer evidence and arguments for policy interventions, or at least provide some ways forward for future research. Most Urban Studies majors, for example, aim toward careers in the public sector, non-profit world, or private sector development. With that in mind, the most important discipline-specific writing is the sort that communicates simply and directly. Most Urban Studies students will move from here into a world of writing memos, policy-support material, and prose that is constrained by a regulatory framework (municipal plans). In these cases, the introduction outlines the problem and its significance. A background section develops the history of the problem, existing policy prescriptions, and a structured exploration of key causes, symptoms, and effects of existing solutions. The paper at this point may then focus on describing possible ways forward and can draw on a range of arguments. It may marshal examples from other contexts and apply them to the existing problem, or it may instead offer evidence from a case study. It could conclude with a discussion that points out the evidence and arguments and make a case for a specific solution, or it may lay out research directions necessary to determine what policy actions should be taken.

2.0 Desired writing abilities

Student-writing objectives emerged from faculty discussions over the period 2008 through 2013. These objectives incorporate many of the forms and purposes of writing found in geography and cognate disciplines. That is, we understand that writing is not simply about “mechanics” or style but is a holistic and active process that can further critical inquiry, informed communication, and professional practice. The list is not exhaustive nor does it address the concerns of all faculty members, but it is a reasonable starting point for what might become a living document.

Changes in the 3rd Edition. This third edition carried forward the original twelve desired writing abilities, but in response to WEC’s Summer 2013 rating of upper-division writing of graduating majors and student experiences in several key courses, the faculty reworded several abilities for clarity and reordered the writing abilities to better match the writing process for many students.
All students graduating with a major in Geography should be able to write in a way that reflects their ability to:

1. **Offer a central thesis.** While the thesis is often framed in terms of answering a question, it is important to recognize a broader range of theses. It may be an issue addressed, problem solved, experiment completed, or literature synthesized. The thesis should be significant (see below) but also focused enough that the writing can address it in a substantial way within the confines of the writing product (e.g., within a page limit). Importantly, the thesis should be grounded in the questions and approaches of a given subfield within GES. As highlighted above, GES has an array of subfields with specific styles, expectations, and practices. While much of the job of developing a central thesis involves the actual structure of writing and marshaling evidence (#2 below) and using effective written, visual, and/or numerical expression (#3 below), effectively developing a thesis involves articulating its significance and demonstrating awareness of the intended audience.
   a. **Articulate significance.** Writing should articulate the significance of the thesis. This can include notions of relevance such as real-world impacts or import (e.g., understanding how flooding happens is important because it affects people and property) or be framed as purely academic contributions that seek to advance understanding of a given topic (e.g., offering a new critical reading of a well-accepted text, positioning an existing issue in a new way within broader debates within a field, or synthesizing existing literature on a topic in a new way). Where germane, writing should adequately characterize existing understanding or knowledge, which most often means providing a representative overview of other views and research that define the topic or issue.
   b. **Demonstrate awareness of audience.** While many students write for academic audiences, some will be writing for non-academics. The student should signal an awareness of an academic audience via the trapping of that sub-field, such as appropriate use of references and demonstrating knowledge of broader theoretical engagements. Students writing for a non-academic audience should signpost their intentions (and thereby awareness of the audience) through strategies including highlighting potential audiences or explicit outcomes such as policy recommendations.

2. **Develop the thesis.** Students should be able to support their claims with well-reasoned arguments of varying kinds, such as empirical, logical, inferential, and text-based rationales. Writing should offer a structured and persuasive argument for the central thesis, where structure implies an organized progression of evidence and statements designed to support the thesis, and persuasive means being coherent, well-stated, and logical, rooted in its data and observations. There are a number of sub-elements for forging the argument.
   a. **Make observations.** Much writing is based on fieldwork, laboratory work, and/or archival research. Students should be able to record and analyze observation-based notes, including, if relevant, making field maps, taking photos, etc. The skill of observation extends to reading critically. Critical “reading” of films, photographs, and maps, as well as traditional texts, is essential to scholarly
writing. Not all writing will necessarily involve observation but majors should have experience with making observations.

b. **Assess evidence and arguments.** Writing in support of a central thesis evaluates observations, facts, or arguments made by others. This varies by paper, but any work that marshals observations or facts should evaluate their quality with respect to the issue being addressed. For numerical data, what are the limitations and advantages of these data for the question posed? For maps and other secondary material, what is their reliability and how is it shaped by their originally intended purpose? If primary materials are used, how does their provenance affect their use (e.g., for newspaper clippings, did the newspaper or writer have an identifiable bias?) For journal or diary entries, how do the goals of the writer or nature of the text affect their utility for the paper’s arguments? Students should be able to assess the veracity and relevance of the arguments and/or conclusions they encounter. Such assessments should be considered part of their own ability to reach and communicate inferences and conclusions.

c. **Use appropriate structure.** Students should be able to structure their writing effectively, as determined by the writing assignment. Well-structured writing may include opening with an introduction that discloses the scope and intent of the written work; dividing the whole into meaningful sections with headings that serve as guideposts for the reader; composing paragraphs that stand alone yet obviously relate to the preceding and subsequent paragraphs; presenting and discussing methods and/or evidence where they contribute most fruitfully to the reader’s understanding; and closing with a summary.

3. **Use effective written, visual, and/or numerical expression.** The writer employs numerical, written, or visual expression in a manner that is furthers the arguments of the thesis. Writing should demonstrate good style (e.g., basics like grammar, of course, but ideally more purely stylistic elements such as mix of word choice and avoiding jargon where possible) as well as substance, such as well-structured paragraphs, continuity between paragraphs, avoiding irrelevant or repetitive information. There are number of specific elements:

   a. **Use effective writing style and syntax.** Students should use correct spelling, punctuation, and syntax, choose appropriate words, and avoid repetition.

   b. **Use visual information.** Students should be able to comprehend and assess visual information in a variety of forms, such as maps, graphs, tables, charts, film, photographs, and video. They should be able to design and employ such forms as needed. Not all writing will involve using visual information, but students should graduate knowing how to use these forms of expression.

   c. **Revision.** Students should understand the importance of revision and should be able to undertake it, not only by taking direction from instructor copy-edits and/or comments but also independently. Students should see writing as a multi-step process that involves brainstorming, outlining, drafting, and revisions.

   d. **Adhere to the university’s ethical standards.** Student writing should conform to the University’s ethical standards concerning plagiarism, “hate speech,” indication of funding sources (if relevant), indication of IRB approval (if relevant), and other standards as they apply.
While the order in which these objectives appear here is not a strict, linear “to do” list, it is structured by a loose logic. Writing is often oriented around a question (or questions) in hopes of developing some argument or interpretation. Such a question may carry with it certain implied or explicit observations to be made and drawn upon. Many times these observations are translated into some form of visual communication and then employed in the writer’s text. Good writing demands attention to the quality of information sources and judicious handling of evidence. Writers may be expected to understand the expectations of the audience to whom their writing is addressed and, in any event, to compose a text in an appropriate manner, with an ability to employ acceptable grammatical and other such “mechanical” rules. As writers reflect on the claims they are making they might find that they care about what they have to say, and that they develop a clearer sense of what makes their claims significant or important. They might, in other words, have an acute sense of the value-laden quality of their statements. All of these qualities of writing are eligible for consideration in the process of revision, essential to the writing process. In so far as the University of Minnesota requires attention to certain ethical standards, these must be of interest as an overriding principle. In reflecting on these criteria several faculty members emphasized that what undergirds the above list of objectives is the relatively straightforward necessity for students to be able to describe clearly what they see and read and to be able to communicate their ideas succinctly when appropriate. Descriptive clarity in writing, all might agree, is to be highly valued.

3.0 Integration of writing into GEC undergraduate curriculum

GEC offers enhanced writing experiences via two requirements of the major--the breadth requirement and the senior project--and a range of optional writing experiences. This structure is identical to that used in the first two editions of the writing plan and best accommodates time and staff constraints. The plan also accommodates our ‘flat’ curriculum, in that over half our majors are transfer students and many majors switch to our programs in their junior year. This flatness is why we do not introduce writing skills in a linear fashion as students move through the major, but as described below, we do advise students on how to best plan their writing experiences in the major and offer additional resources along the way.

3.1 Writing experiences required for the major

Majors require writing courses. BA/BS students must take required courses in Urban Studies and Geography. At least two of these courses have a writing component and the majority of the courses available to students as core electives in the majors are WI or heavily involved with writing. These are taught by faculty instructors who have successfully integrated writing instruction into the content of their course, depending upon appropriate TA support to do so. We propose maintaining the WI status of these courses, including continued TA support that is targeted toward their WI components. See Appendix I for a list of courses under each major.

The senior project is writing intensive. The senior project is an independent research project required of every student majoring in GES, and it will remain the capstone writing-intensive experience under the terms of this Writing Plan (see Appendix II). The project is already an excellent vehicle for learning writing, but we are also revising our guidelines for the senior
project so that these better reflect our collective sense of threshold for acceptable writing. Guidelines will be distributed to our undergraduates. It should be clear to students how these guidelines are helping them to meet departmental writing objectives.

3.2 Additional writing experiences and guidance

We use a range of strategies outside of the senior project and writing-oriented courses in the major to encourage students to have writing encounters.

- The Undergraduate Advisor encourages students to complete their breadth requirements as early as possible so that all their subsequent writing in the major might benefit.
- The senior project is writing intensive and students have the opportunity to design (under guidance of the instructor) a research topic and project of compelling interest to them.
- GEC offers a half dozen WI courses that are not required of its majors but that enroll substantial numbers of these student, and are successful in providing instruction and guidance for student writing linked to integral disciplinary content and pedagogy. Our plan assumes that resources flowing to these courses by virtue of their WI status will be maintained.

4.0 Assessment of writing

Response to Summer 2013 rating of writing. The summer rating gave insights into writing gleaned from our senior project seminars and two other 3xxx level writing intensive courses that are central to our writing plan. We kept the original twelve desired writing abilities but rearranged them into a nested structure that the faculty felt better reflects the writing process and rewrote a few that the faculty felt (with input from the ratings) should be more clear. The major changes were still relatively small. The first was broadening the ability “Ask a question” to “Develop a thesis” because many kinds of geographical writing are not organized around a question. The second was splitting up the ability “Take a principled, not arbitrary position” into two other existing abilities, namely “Articulate significance” and “Demonstrate awareness of audience.”

General strategies for assessing writing. We provide a writing guide to instructors and students to facilitate common assessment practices but also rely to a great extent on individual faculty devising course-appropriate means of assessment. The faculty developed the writing guide as part of putting together this writing plan, and would like to continue development of the guide this year with aid from an RA. The guide is available at [http://www.geog.umn.edu/styleguide](http://www.geog.umn.edu/styleguide). Beyond the guide, student progress in meeting departmental writing objectives will occur within individual courses, as determined by the instructor and TAs if relevant. It is important to note that the writing courses targeted in this Writing Plan vary in the kind of writing assignments required of students. Writing pedagogy is necessarily an interpretative act on the part of instructors. Instructors translate departmental objectives for purposes appropriate to individual courses, including selecting the objectives pertinent to their courses. Assessment tools and criteria therefore vary from course to course rather than conforming to a rigid standard. Appendix III contains examples of assessment criteria.
Grading criteria. Below is a menu of criteria that can be offered to faculty and instructors for selective adapting where germane as translated from writing abilities (Section 2). It may also be used in the WEC team’s longitudinal rating process if there is an additional round of assessment beyond the Summer 2013 session.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1. Offer a central thesis</td>
<td>While the thesis is often framed in terms of answering a question, it is important to recognize a broader range of theses. It may be an issue addressed, problem solved, experiment completed, or literature synthesized.</td>
</tr>
<tr>
<td>1a. Articulate significance</td>
<td>This can include notions of relevance such as real-world impacts or import or be framed as purely academic contributions that seek to advance understanding of a given topic.</td>
</tr>
<tr>
<td>1b. Demonstrate awareness of audience</td>
<td>Signal an awareness of an academic audience via the trapping of that sub-field, such as appropriate use of references and demonstrating knowledge of broader theoretical engagements, or when writing for a non-academic audience should signpost their intentions through strategies including highlighting potential audiences or explicit outcomes such as policy recommendations.</td>
</tr>
<tr>
<td>2. Develop the thesis</td>
<td>Students should be able to support their claims with well-reasoned arguments of varying kinds, such as empirical, logical, inferential, and text-based rationales.</td>
</tr>
<tr>
<td>2a. Make observations</td>
<td>Students should be able to record and analyze observation-based notes, including, if relevant, making field maps, taking photos, etc. The skill of observation extends to reading critically. Not all writing will necessarily involve observation but majors should have experience with making observations.</td>
</tr>
<tr>
<td>2b. Assess evidence and arguments</td>
<td>Evaluates observations, facts, or arguments made by others.</td>
</tr>
<tr>
<td>2c. Use appropriate structure</td>
<td>This will vary by sub-field and is tied to the assignment used.</td>
</tr>
<tr>
<td>3. Use effective written, visual, and/or numerical expression</td>
<td>Writing should demonstrate good style as well as substance.</td>
</tr>
<tr>
<td>3a. Use effective writing style and syntax.</td>
<td>Students should use correct spelling, punctuation, and syntax, choose appropriate words, and avoid repetition.</td>
</tr>
<tr>
<td>3b. Use visual information</td>
<td>Not all writing will involve using visual information, but students should graduate knowing how to use these forms of expression.</td>
</tr>
<tr>
<td>3c. Revision</td>
<td>Ideally writing as part of most assignments is a multi-step process that involves brainstorming, outlining, drafting, and revisions. May not be able to use this directly as criteria when grading a final product.</td>
</tr>
<tr>
<td>3d. Adhere to the university’s ethical standards</td>
<td>In addition to obvious elements such as adhering to ethical standards concerning plagiarism or hate speech, cites to pertinent authorities such as IRB or discloses funding sources.</td>
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</tbody>
</table>
5.0 Summary of implementation plans and requested support

We request support for an RA to aid five activities that further implement our writing plan in Spring and Summer 2014. All activities are oriented towards wrapping up existing work and moving writing-support activities to a steady state where no further resources from WEC will be necessary. Ongoing maintenance will be conducted by the Director of Undergraduate Studies, Undergraduate Advisor, and Undergraduate Policy Committee.

- **Writing guide.** During academic year 2009-2010, the Department hired an RA to assist with the development of an online Department of Geography Writing Guide. Funds were obtained on the basis of the first edition of the writing plan. The Writing Guide was placed online in summer 2010. The guide has seen mixed use by faculty, ranging from a few who pretty much ignore it through to a number who embrace it to varying degrees. Faculty agree overall that it should be developed further to make it a valuable resource for students and instructors by updating it and more tightly tying it to our other plans with exemplars, the workshops, and the senior project pathways documentation. We also want to make sure it better captures ‘best of breed’ resources on generic issues such as plagiarism, while we focus on the parts specific to geography, such as writing samples and exemplars.
  - During academic year 2013-2014, the WEC faculty liaison will guide the faculty through an evaluation of the Writing Guide with the aid of a RA funded by WEC. The goal of the evaluation is to identify and make whatever revisions are necessary to ensure the Writing Guide’s use, in part or whole, by faculty and students.
  - In terms of assessment, we will canvas instructors on their use of the writing guide, and through them, gain a sense of how/whether students in their class find the guide helpful. We will also use the guide in our Spring 2014 offerings of the senior project seminars and ask student to reflect on how we can change it to make it more useful.
  - In terms of WEC staff participation, we would seek advice on structure and resources (e.g., on plagiarism, writing across disciplines).

- **Exemplars.** WEC staff indicated that one strategy for guiding students in their writing is to provide exemplars in the form of samples of writing ranging from snippets and outlines all the way through to entire papers.
  - The RA will work with faculty and the undergraduate advisor to identify and excerpt exemplars (not entire papers) and then rework them so that they cannot be linked back to the original work in order to render them anonymous. We will then work them into our writing guide.
  - We will also tie these into sample major plans, highlighting paths through the major that lead to specific careers and outcomes. The Undergraduate Advisor has Senior projects (2011-present) for all papers that received an “A.” The RA will work with faculty to choose exemplars along with samples drawn from other kinds of writing projects.
  - In terms of assessment, we will ask the Undergraduate Policy Committee to examine the selected passages and divide them into exemplars of good, OK, and poor writing. We will also assess, with faculty, how actual classroom use went.
○ In terms of WEC staff participation, we would seek advice choosing examples (e.g., we spoke to WEC about choosing a range of best, OK, and poor cases). WEC recommends, and we plan to implement, using exemplars as teaching tools in the hands of faculty members and TAs. We will employ several strategies for doing so: 1) the five-minute workshop model, which WEC could work with the RA and DUS to develop; 2) reserve short periods in faculty meetings and our annual retreats for people to report on those they’ve used, how it went, and ways to create future ones; and 3) working with faculty members as they design courses to get samples into websites, assignments, and syllabi.

- **Student information brochure.** We will refine our brochure and web page linked to the Department’s web site, introducing Geography’s writing enriched curriculum and writing objectives to students majoring in Geography.
  ○ This will occur in conjunction with the rollout of our new BA/BS.
  ○ The Director of Undergraduate Studies and the Undergraduate Advisor will assess the effect of the brochure over the course of advising meetings with students.

- **Workshop development.** The first edition of the Writing Plan, proposed developing a 1-credit preparatory course to be required of students before they embark on the senior project. Staffing shortages and difficulties fitting this into student schedules required altering that plan for the second edition of our plan. In its place, the Undergraduate Advisor coordinated and helped conduct two late-semester workshops. The goals of the workshop were to a) introduce juniors and seniors to the expected scope, content, and warrant for senior projects and b) brainstorm topic ideas with students with a special emphasis on writing as a process.
  ○ We propose to continue to develop smaller modular writing workshops that can be held as free-standing sessions, such as through brown-bag lunches, as well as built into longer, semester long courses. We envision creating two or three short (say, one hour) workshops built on brief presentations that draw on the writing guide, exemplars, and pathways document.
  ○ The Director of Undergraduate Studies and senior project instructors will assess the performance and utility of the workshops as part of the seminar experience.
  ○ In terms of WEC staff participation, we would seek advice on structure and resources, or other avenues that we should explore (e.g., offering discipline-specific workshops that complement more generic writing workshops offered in other venues).

- **Pathways to the senior project.** The RA will work with the faculty and Undergraduate Advisor to assess use of our ‘Pathways to the Senior Project’ documentation and design ways to make it more useful to students and faculty.
# Summary of tasks, reporting relationships, and scheduling

<table>
<thead>
<tr>
<th>Task</th>
<th>Reporting</th>
<th>Meetings and Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing guides</td>
<td>Director of Undergraduate Studies (DUS) WEC</td>
<td>Will meet DUS bi-weekly in Spring 2014 to revamp writing guide. Will meet faculty and with WEC staff as needed. Guide will be finished by April 2014.</td>
</tr>
<tr>
<td>Exemplars</td>
<td>Director of Undergraduate Studies Undergraduate Advisor (UGA) Undergraduate Policy Committee (UPC) WEC</td>
<td>Will meet DUS bi-weekly in Summer 2014 to revamp writing guide. Will meet faculty and WEC staff as needed for samples taken from their courses from Spring 2014 onward. Exemplars will be finished by July 2014.</td>
</tr>
<tr>
<td>Brochures</td>
<td>Director of Undergraduate Studies Undergraduate Policy Committee</td>
<td>Will meet DUS and UGA bi-weekly in Spring 2014 to develop brochure. Will meet with UPC to get feedback on brochures and get their approval as needed. Brochures will be online by August 2014.</td>
</tr>
<tr>
<td>Workshops</td>
<td>Director of Undergraduate Studies Senior project instructors WEC</td>
<td>Will meet DUS bi-weekly in Spring and Summer 2014 to revamp the workshops. Will meet with senior project instructors several time during Fall 2014. Will meet with WEC as needed. Workshops will be rolled out in Fall 2014 and Spring 2015 as part of senior project seminars, and then at additional times after that once they have been changed as necessary after seminars.</td>
</tr>
<tr>
<td>Pathways</td>
<td>Director of Undergraduate Studies Undergraduate Advisor</td>
<td>Will meet DUS and UGA bi-weekly in Spring and Summer 2014 to pathways documents. UGA will roll out pathways documents will be rolled out online over late summer 2014 and through Fall 2014.</td>
</tr>
</tbody>
</table>
Faculty will engage in two activities to implement our writing plan, one of which will require consultation with WEC:

- **Teaching-with-Writing Workshops.** After consulting with WEC in Summer and Fall 2013, we anticipate requesting additional teaching-with-writing seminars for faculty and graduate students, geared toward enhancing the application of our departmental writing objectives. The Department hosted two workshops on “designing writing assignments” and “assessing/grading student writing,” in 2012. As faculty become more conscious of the very writing objectives they have identified, they—and graduate students—may wish to develop ways to further deepen, broaden, or in some other way rethink how writing works in their teaching.

- **TA Training.** Upon their completion the writing guide and undergraduate student information brochure will be made available to all current Geography graduate students and to incoming graduate students each year. A faculty member from the department’s Undergraduate Education Policy Committee (a standing committee) will conduct a meeting annually, either at the annual graduate student orientation in August or at some other point early in the fall semester. That faculty member will introduce the graduate students to the Department’s writing objectives and the writing guide. We expect that instructors of specific WI courses will train further their TAs in ways appropriate for fulfillment of the departmental writing objectives that are applicable to their courses. We further expect that these instructors will consult with WEC staff to determine which, if any, instructional training workshops are suitable for our TAs to attend.

### 6.0 Process used to create this writing plan

**First Edition.** In the fall of 2008, at a meeting of the full faculty, the faculty drew up a list of writing characteristics and abilities (writing objectives). At a separate meeting of the full faculty during the same semester, the faculty generated ideas pertaining to the infusion of the writing objectives into the curriculum and the development of a writing guide. In the spring semester of 2009, Professor Henderson, the Geography faculty liaison for WEC, took up those ideas, consulted intensively with numerous faculty members on the existing and desired role of writing in their specific courses. The heart of this consultation consisted of a detailed questionnaire distributed to instructors of the relevant Gateway courses, the Ways of Knowing courses, and the senior project seminar, described herein (sections II. A – C. and Appendixes). These instructors also were asked for and provided syllabuses, sample writing assignments, and grading rubrics. In addition, Henderson contacted instructors of WI courses not referenced in sections II. A – C. of this document. These instructors were asked to supply detailed information on how they use writing in these courses, both in general and with reference to specific departmental writing objectives. Henderson engaged many of the above colleagues with follow-up questions and clarifications. During these consultations a few new ideas arose for the Writing Plan: the 1-credit preparatory course for the senior project, the Map Library liaison, and the desirability of “teaching with writing” workshops oriented to selected departmental objectives. Henderson developed the results of all the above into a formal proposal (a first draft of the Writing Plan) for presentation to the Department’s Undergraduate Education Policy Committee (UEPC), April 17. At this meeting, in which Pamela Flash participated, several issues were identified that needed further clarification. The Committee reached an agreement on how revisions should be made to
the Writing Plan. Henderson revised the Plan accordingly and circulated it to the faculty on April 20. The period April 20 to 29 was designated as a period of comment by the whole faculty. Based upon comments received, Henderson apprised the faculty of changes to be made to the final version and, on May 1, circulated a ballot for approval of the Writing Plan for the Geography Major. 12 faculty members returned a vote of “yes” (approval), 0 voted no, and 3 abstained. Professor Judith Martin, Director of Urban Studies, circulated the Writing Plan for the Urban Studies Major, written by her in consultation with Urban Studies faculty, during this time period. (See Urban Studies Writing Plan.) Henderson did not ask for a vote on the Urban Studies Writing Plan. Decisions regarding the Urban Studies curriculum have not normally been undertaken by department faculty as a whole.

Second Edition. Steps leading to the revised plan were considerably less involved than with the first edition. The short of it is that the faculty liaison revised those portions of the plan affected by resource shortages (e.g. deletion of plan to upgrade several courses to WI status) and scheduling constraints (e.g. delay of plans to assess guidelines for senior project). Henderson also took into account work accomplished in AY 2009-2010. We buttressed the plan for URBS in the second edition, consultation and input was sought from Prof. Brenda Kayzar and Paula Pentel from then program director Judith Martin, as all three taught regularly scheduled Urbs courses.

Third Edition. The faculty liaison (Steve Manson, Director of Undergraduate Studies) worked with WEC and several faculty committees to revise the writing plan. This effort focused on those portions of the plan affected by the Summer 2013 assessment of writing (i.e., rearticulating Section 2) and the BA/BS revisions (especially Section 3). He also added Section 1 and Section 7 to reflect changes in writing plan format. This edition also combines program information for Geography and Urban Studies majors at the request of faculty, in large part to streamline the document for students and instructors. Manson met with WEC Project liaison Pamela Flash several times over Summer 2013 to discuss the WEC-administered assessment of writing. The Undergraduate Policy Committee met with Flash in October 2013 to discuss the assessment of writing ratings and the rewrote the writing plan where necessary. The entire faculty met to discuss, change, and approve the third edition later in the month, with a special emphasis on rewriting and restructuring the desired writing abilities in Section 2. WEC Project liaison Pamela Flash provided two rounds of feedback on the plan and then GES then sent it to the College of Liberal Art’s Committee on Instruction and Advising for feedback and approval before the committee in turn forwarded it to the UMN Writing Board.

7.0 Overlap with university’s Student Learning Outcomes

The ideas contained in this Writing Plan clearly address the University's Student Learning Outcomes. The desired abilities in section 2 and the writing guide relate to many of the SLOs, including “Can locate and critically evaluate information” and “Can communicate effectively.” The majority of the courses described by the breadth requirements (see Section 3) all meet a number of SLOs as part of the Liberal Education certification process.
Appendix I
Incorporation of Departmental Writing Objectives into Breadth Requirement Courses

Overview

Geog BA/BS students must take suite of required courses, at least two of which have a writing focus. The following courses are among the options given to students: Ways of Knowing (Geog 4001 or 4002W); Environmental Geography (Geog 1403, 1425, 3401, 3431, 3839); Geographic Information Science (Geog 1502, 3561, 3511, 3531, 3521, 3523); Human Geography (Geog 1301W, 1973, 3101, 3331, 3371W, 3379, 3373, 3381W, 3361W, Urbs 1001/3001)

Urbs BA/BS students must take a number of required courses with a writing focus. Introduction to Urban Studies (1001/3001) has always required two papers, weekly reading critiques, and students at the 3000-level do a research paper. Majors must take a set of colloquia and workshops that required written papers of varied types. Other electives also have a writing component (e.g., Urbs 3301, 3751, and 3771. Urbs 1001/3001, 3301, and 3955 are currently WI-designated.

Examples

GEOG 3361W: Geography and Public Policy

Departmental writing objectives 4, 5, 8, 9, and 11 are relevant to this course.

The focus of this course is on federal policy relating to producing the visible landscapes of the United States. Accordingly, the written work required of students focuses on that theme. After a first paper in which students communicate their present knowledge of federal policy, they go on to choose specific topics within certain prescribed broad themes covered in the course (e.g. a federal statute, a federal judicial decision, a public corporation, as each of these is involved in federal policy in some way). At the beginning of the semester students choose a good of some kind, the production of which is guided by federal policy. Written work is done with attention to that choice of good. Given the prominence of the Web as a source of information, particular attention is given to its appropriate use.

There are 8 written projects in the course—two 3-page essays and six 5-10 page papers. Several of the departmental writing objectives are relevant in this work, as follows:

• Objective 4 Evaluate the quality of information sources: The instructor gives a lecture describing how to find material relevant to the course on the web and gives basic references throughout the semester. For the most part the instructor directs student’s attention to the sources of information for their projects explaining why he use these sources and why students should also use them – and not merely to complete their projects satisfactorily. The instructor does, however, ask that student go beyond the sources given them and find other information. Often individual students ask for suggestions
Objective 5 Weigh (assess) evidence: Most of the writing assignments in the course involve students accessing specific types of information through the various electronic databases subscribed to by the University Libraries. Part of the project, then, is to find the information. They answer questions posed by the instructor, answers which require they understand and communicate their understanding of a considerable volume of unfamiliar information.

Objective 8 Use appropriate narrative / compositional structure: The instructor grades papers based on the factual information they contain and the way in which that information is communicated to the instructor. (The instructor makes clear what that information should be.) Organization and grammar, paragraph and sentence construction are all important. The instructor gives extensive comments on the first several pages of each paper, fewer on the remainder. He requires students to revise their first attempts at writing and urges all of them to revise as often as they have time and to avail themselves of the opportunities at the Writing Center.

Objective 9 Writing mechanics: See above.

Objective 11 Revise: Students in this course are required to revise two of the papers. Following grading, however, the instructor encourages students to resubmit any of their papers for re-grading after they have revised in the light of his comments.

Here are examples of the writing assignments, following the first introductory assignment:

**PROJECT 2. DUE SEPTEMBER 30**
Find a federal statute that concerns the topic you have chosen in the Statutes at Large
Make a copy of it. Submit an Appendix - if large submit the first few pages and the last few

A. In three pages describe, in colloquial English
   Its purpose
   How Congress intended to achieve that purpose
   What assumptions, often called findings, Congress made
   What authority Congress delegated
   What money Congress appropriated

B. Trace its legislative history - the path of the proposed legislation through its introduction as a bill to its passage as an act
C. Note where the statute is coded in the United States Code. What amendments have taken place since the statute was first enacted?
D. Using periodicals, such as the National Journal and the Congressional Quarterly Weekly, and other, more popular, periodicals (e.g. Time, Newsweek), as well as newspapers, the Web, and traditional library materials, briefly comment on the consequences of the legislation

**PROJECT 3. DUE OCTOBER 14**

Find the regulation authorized by the statute in Project 1 in the Code of Federal Regulations
Make a copy of it. Submit an Appendix - if large submit the first few pages and the last few
A. In three pages describe, in colloquial English, what it was intended to do and how
B. Trace its history, from when it was first published as a Proposed Rule in the Federal Register, most likely soon after the act that authorized it, to when it was published as a Final Rule in the Federal Register and also in the Code of Federal Regulations
C. Describe any changes in the rule since it was first promulgated
D. Using publications of the appropriate agency and periodicals, such as the National Journal and the Congressional Quarterly Weekly, and other, more popular, periodicals (e.g. Time, Newsweek), as well as newspapers, the Internet and traditional library materials, briefly comment on the consequences of the regulation

PROJECT 6. DUE DECEMBER 09

Concluding paper - briefly describe federal policy regarding the product you have investigated during the semester
Include an updated bibliography
You should also rework you introductory paper
Along with this project, turn in all previous work for which you have received a grade

GEOG 3371W Cities, Citizens, and Communities

Departmental writing objectives 1 – 12 are relevant in this course in various ways, 1, 2, and 4 – 11, especially so. In Geog 3371 writing is an irreplaceable way for students to figure out and communicate what they think. It is their own “production process” that alters the “raw materials” of the course and turns them into something that reflects their own critical faculties. Yet different kinds of writing do this differently:

• In-take writing exercise (3 pages) orients students to the expectations for several of the writing objectives in Geog 3371. In particular the exercise models a question of the sort that would appear on the take-home essay portion of exams and draws attention to certain of the skills necessary for successful completion of the group project required in the course. Such a question would ask students to identify and evaluate the argument contained in a scholarly work they have read (assigned in the course) and to discuss the significance of that argument. (A prior class period is spent on the notion of “significance.” Discussion begins with the instructor asking students how they know that some phenomenon in the world “matters” and takes off from there. Through this discussion we develop collectively a set of criteria for what makes an issue significant. The notion of significance is then threaded through the remainder of the course.) Students are required to revise this written exercise, based upon instructor/TA comments. Writing objectives relevant to the in-take exercise are 5 – 11.

• Short in-class written responses to either something I have said in lecture or to a quotation from the assigned reading. These moments allow students to engage in some active listening/reading, during which they can put into a few words their “gut reaction” to a particular claim and, often, critically assess that reaction. These short responses do not conform to any particular writing
objective identified by the Department. Rather they are brief exercises in using writing to prompt
thought and discussion.

- **Essay questions** on the midterm and final exams. There are two 5-page take-home essays
whose purpose is to help students express through polished writing an argument (not just an
opinion) pertaining to some “live” controversy they have been learning about in the course.
While there are certain minimum expectations of proper grammar and other writing mechanics,
the emphasis is on writing that balances convincingly the elements of their argument with
evidence supporting the argument. **Writing objectives 5 - 10 are relevant.**

- **The written component of the group project.** Here students strive to balance evidence,
argument, and minimum expectations of proper grammar and writing mechanics. But group
effort now enters the picture. This allows for a distinct kind of writing/thinking/speaking
experience: within their group students are “citizens” responsible to each other. They decide
together on a fair division of labor, they make commitments to each other to set meeting times
and show up for them, they make good on promises to read drafts and provide timely feedback.
There are three phases of the written group project: the annotated bibliography due from each
student, the 2-page progress report due from each student, and final report of 15-20 pages total
from the small group. Feedback is provided on the annotated bibliography and progress reports,
in advance of the due date of the final report. **Writing objectives 1 – 12 are relevant.**

- **The oral component of the group project.** Students learn to translate their findings into
coherent, visually legible, and audible presentations. **Writing objective 7 is especially relevant.**

**GEOG 3381W Population in an Interacting World**

Departmental objectives 1 – 4 and 5 – 12 are applicable in this course. Through the writing
component of Geog 3381, generally speaking, students learn about basic sources, measures, and
methods of representation used in the study of human population phenomena, and gain basic
skills and experience in data analysis, interpretation, and writing research reports. In addition
students learn how to think and write critically about research in the field of population studies.
Writing assignments in the course include:

- **Demographic measures and population pyramid exercises.** The first three weeks of the class
introduce students to the field of population studies: Familiarizing them with the object of study,
with key sources of information, measures and explanatory frameworks for the study of
population growth and change. Students learn how to calculate and represent key measures in
demographic analysis through two short writing assignments a demographic measures exercise
and construction of a Population Pyramid. These exercises tutor students in basic observation
and manipulation of numerical and statistical population data. These exercises help students
build analytical skills important for their assessment of how scholars from different disciplines
and at different points in time have theorized the causes and consequences of population growth
and change. **Departmental writing objective 3 is especially relevant.**
• **Book review.** A 2 page double-spaced book review is required of all students. The review includes a brief description of the main point and purpose of the book, a description of the content (the main themes/topics and arguments discussed in the book), and a critical analysis and evaluation of the arguments and empirical evidence provided in the book. The review is thus not simply a report or summary. It incorporates the student’s assessment of the strengths and weaknesses of the material and arguments presented, with a developed argument for why the assessment is what it is and some reflection on the challenge the book may pose to their (prior) views. Students are asked to refrain from simplistic, loaded and casual statements, such as, “The author’s introduction is outstanding but the conclusion is bad”. They also are asked to treat the author of the book with respect even when they are being critical, with the kind of respect that they would like a critic to treat them if they had authored a book. **Departmental writing objectives 4 – 10 and 12 are relevant to the book review.**

• **Response papers.** Several times during the semester students are asked to write brief response papers (1 single-spaced typed page) based on videos and other activities. These papers are not graded (but read) and are worth 10% of the final grade. **Departmental writing objectives 1, 2, 5, and 12 are relevant.**

• **Research paper.** The major written assignment for the course is a required research paper. The project complements class discussions by asking students to conduct research on a particular population issue/theme in a country or place outside the United States. Themes include: The spread and fight against infectious diseases; Family planning and reproductive health; Megacities in the global South; Refugees in Minnesota (exploring the presence of the world within the US, rather than simply outside it); and Food security, malnutrition and hunger. The paper is 8-10 pages long (not including bibliography and figures). Other particulars include the expectation that the paper will be divided into appropriate sections, will make clear use of and in-text reference to graphs, tables, maps or other visual elements, and will have a developed, well-supported argument. The assignment includes submitting a first version of the research paper, on which students receive detailed comments about the quality of their writing. Students are expected to make revisions and improvements to their paper and then submit the final version. Before submitting the first version of the paper, students submit an annotated bibliography including at least 4 academic peer-reviewed publications (journal articles and books) that will be used as sources for the research. Due dates for each phase of the project are staggered throughout the semester so that there is ample time to incorporate instructor feedback. **Departmental writing objectives 1, 4, 5, 6, 8, 9, 11, and 12 are especially relevant. Objective 3 will be relevant depending upon specific topic and approach.**

**GEOG 3401 Geography of Environmental Systems and Global Change**

Departmental writing objectives applicable to this course are 3-4-5-6 and 8-9-10-11-12 (in various ways, although 4-5-6, 8-9, and 11-12 are most relevant. Writing is incorporated throughout the course through a variety of means, distributed across a number of different writing assignments. There are 4 homework projects in the course and the final term project (paper).
**Homework projects.** In the homework projects, which cover topics such as soil surveys, local climate processes, and vegetation change, the instructor asks students to gather numerical and textual information to produce charts, graphs, diagrams, and/or maps. (Explicit instructions are provided regarding how to procure appropriate information.) The instructor also asks for interpretations of these charts, maps, etc. so that students gain some experience in both knowing how to produce at least simple versions of some kinds of graphical information and in interpreting graphical information. (These same requirements apply to the term paper, described below, in which arguments depend upon the incorporation of evidence such as maps, charts, graphs, tables. Accordingly these forms of evidence are expected of students.) Departmental writing objectives are applicable to the homework projects as follows:

**Project 1:** departmental writing objectives 3-4-5-6, 8-9, 12

**Project 2:** departmental writing objectives 3, 6, 8-9, 12

**Project 3:** departmental writing objectives 3, 6, 8-9, 12

**Project 4:** departmental writing objectives 3, 5-6, 8-9, 12

**Final term project.** The term project (paper) is broken into several pieces that are due during the semester:

- a. Preliminary bibliography: Instructor provides feedback about the kinds of sources students are looking at as well as the mechanics of how they are citing sources.

- b. Annotated outline: What kinds of things are needed for the paper? This draws heavily from a list of items the instructor tells students they have to consider, but because everyone has a different location as the focus of their paper, some of those items are relevant for them, and some are not. On the annotated outline the instructor provides suggestions about things that are more or less important for their project site, and makes suggestions as to how the paper might be organized (although that is pretty well set by the term project assignment, too).

- c. Preliminary draft of one section of the paper: The first substantive feedback on writing mechanics. Have they made statements that are substantiated by the evidence they cite? Are they citing their evidence? Is there a logical and coherent structure to the paper? How are they using different sources to make their own claims/interpretations of what is important for their particular location? How are they using maps, graphs, tables, etc. within the text? Is there evidence of plagiarism?

- d. Press release: A one-pager that summarizes the main findings of their term project research. It can be written in a number of ways (letter to the editor, statement of findings for a city council, executive report to an NGO, etc.) and should include some graphics to help substantiate the claims. The press releases are shared with the rest of the class so that students can learn a bit about how climate change and human activity may be connected in different ways in different places.

- e. Final paper: This one doesn’t get feedback, it’s turned in on the last day of class. In this paper the instructor is looking for (not in order of importance) (1) consultation of relevant sources, (2) a logical, well structured, and easy to follow argument, (3) good writing mechanics, (4) appropriate use of graphs, maps, tables, and so on to supply evidence and/or to substantiate claims, (5) ability to synthesize different sources of evidence (text, data, maps) in order to develop their own claims, (6) appropriate citation to sources (no plagiarism), (7) evidence that they’ve developed a more complex/nuanced understanding of the interrelationships between humans and the environment (Most of them don’t have a very nuanced understanding at the
outset, which the instructor gauges by asking them to send her some get-to-know-you kinds of information including what they want to learn in this class). Departmental writing objectives 3-4-5-6 and 8-9-10-11-12 apply to the term project.

**GEOG 3561 Principles of Geographic Information Systems**

Departmental writing objectives 2, 3, 4 – 7, and 10 are applicable to this course. The Principles of GIScience course (GEOG 3561) is not, however, a writing course in the traditional sense of “writing.” Nonetheless many geographers consider that both the mapping and numerical/statistical procedures of Geographic Information Science are a form of writing. This idea is endorsed by the department’s Writing Plan. GEOG 3561 teaches students a core set of skills with which they can be productive members of the GIS workforce and of the broader geography community. After successfully completing the course, students are able to evaluate evidence, decide on an appropriate method to analyze and synthesize this evidence, and finally communicate the results of their analysis through maps and cogent written explanations. As a “concepts” course, as opposed to a software course, students are taught fundamental principles of GIS that transcend software platforms, specific problem domains, and technology. Exercises done in both lecture and lab require students to spend time away from the computer, critically analyzing information, using spatial logic, and communicating their findings. Our hope is that students from the class could, for example, be successful at a GIS consulting firm, where they would be presented with a problem, be responsible for gathering and weighing the appropriateness of data, be required to select optimal ways of pulling these data sets and other forms of evidence together, and finally be asked to prepare reports (prose, graphics, and oral) about their techniques and conclusions.

Geog 3561 is primarily a lab course with a lecture; students’ main expectations are centered on learning software, though the mission of the course is the teaching and experience of concepts and critical thinking with respect to geographic information. As such, exercises in the labs are designed not only to teach the buttons and menus that will enable a task to be completed in GIS, but also make students perform several of the tasks outlined in the WEC agenda. Most lab assignments require the interpretation of maps the students create in GIS, or a written consideration of reasons for the methods they have chosen (or have been told to choose). Answers to these questions are reflective and synthetic, and cannot be answered by regurgitating instructions or readings from earlier in the assignment. The lab answers most appropriately fit within numbers 2, 3, and 4 of the writing characteristics. (Writing tasks are also part of the lecture period, as students have brief writing assignments pursuant to active learning pedagogical strategies. These “Questions Du Jour” help the instructor assess student understanding of principles set out in lecture and do not follow any particular departmental writing objective.)

Departmental writing objectives are incorporated into the course in the following specific ways:

- **Objective 2: Make observations.** GIS is primarily visual, and lab exercises and lecture assignments in 3561 often require visual analysis of maps, tables, statistical graphics, and analytical output. For example, students are asked in labs to make predictions about the
mechanisms behind the distribution of a mapped phenomenon such as crop yield or pollutant density by assessing the maps in relation to other maps or known distributions.

• Objective 3: Use visual information. The creation of useable maps to communicate conclusions (and in some cases explore data privately) is a core concept in 3561. These maps are typically done on the computer but also common in the active learning lecture exercises is the creation of sketched maps or diagrams without the aid of a computer. In lab exercises, we frequently ask students to “interpret what you see” in a written short answer in order to assess critical and synthetic thinking.

• Objective 4: Evaluate the quality of information sources. A fundamental concept in the lectures and reading is the responsible and critical treatment of digital information. In fact, this is a major distinction between 3561 and other courses that are more software-oriented (perhaps taught at a vocational school). We dispel myths about the veracity of mapped information and students are asked to judge the appropriateness, accuracy, and context of data sources.

• Objectives 5 and 6: Weigh (assess) and use evidence. The selection of appropriate information (themes) in GIS is a vital consideration and a critical assessment of the data displayed in GIS (either in students' own projects or in evaluation of others’ projects) should be undertaken before a conclusion or an interpretation is made. In addition, the various transformations of information (map projections, generalization, aggregation, classifications) also influence the veracity of arguments being made with GIS. Because critical thinking skills are emphasized in the concepts course, this class will enable appropriate evaluation of those arguments.

• Objective 7: Be aware of audience. The creation of successful maps and other devices for communication with GIS is dependent on the audience; this is discussed in the class. An expert reader of GIS output is more likely, for example, to desire detail and dense information content, while a novice or lay reader may be satisfied with more general overview displays or streamlined and more targeted details.

• Objective 10: Principled positions. Related to #4 above, we stress the subjectivity of much of GIScience, including the selection of variables, the appropriateness of map symbolization, and the representation of geographic information in digital, numerical, and otherwise abstracted forms. This leads (better) students to address this subjectivity in their lab reports, citing the potential for misinterpretation, misappropriation, or other unintended consequences of GIS analysis and output. This treatment of ethics and subjectivity is not addressed specifically in writing assignments at present (though a consideration of uncertainty in geographic information is addressed), but it could be without too much effort in future iterations of the course, and would form the basis for an appropriate writing task.

Urbs 1001/3001: Introduction to Urban Studies
Departmental writing objectives are touched on in multiple ways. Writing is incorporated throughout the course through a variety of means, distributed across a number of different writing assignments. There are 4 homework projects in the course and the final term project (paper). All papers must be typed (double-spaced), and written in appropriate academic style: correct spelling and syntax, sources noted where necessary.

Two of the papers are short (4 pp – typed and double-spaced). The third written assignment is a set of reading critiques, which will be discussed in class. Research papers are a possible option for a small number of students in the 3000 level -- you must speak to me by the 15th of September if you wish to write a research paper. All written assignments will be graded on both content and writing style – remember that this is a WI course. Evidence of improvement over the term will be taken into consideration in final grading. The content and expectations for the papers are these:

Assignments for the 1000 and 3000 levels are the same content, with different expectations. Course Grading will distinguish between the two levels. Expectations are that those taking 3001 will demonstrate stronger analytical abilities and better writing skills, and will engage the course materials more deliberately. The content and expectations for the papers are these:

Paper #1 (4 pages, double-spaced, typed) is what I call an "urban autobiography". You are to convey how and what you think about cities based on your experiences living in or near them, or visiting them. This is NOT to be a litany of where you have lived or traveled. It is to be a thoughtful analysis of your ideas about cities, of what your own urban experiences have meant to you, and how they have shaped your thinking.

Paper #2 (also 4 pages, double spaced and typed) is to be a fieldwork report. I will expect you to choose an area within the larger Twin Cities to visit, examine and analyze. This area can be large or small, in the city or in the suburbs. You can walk, bike or drive. The only condition is that it be a place that you have not been to before. The point is to use what skills you have to describe (briefly) the area you choose, and to analyze it in whatever terms make sense to you. You might want to read the “Naglee Park” chapter from Looking at Cities before you begin.

Final Assignment For most of you, this will be your weekly critiques of the readings (13 in all). It is important to remember that a critique is your considered response to something you have read. You are to have a point of view and be able to substantiate it. These are NOT to be summaries. The first set (1-3) will be due by Sept 25th for early review. A second set (4-7) is due Nov 1st. The full complement (including ALL entries submitted earlier in the term) will be due on December 4th.

For a few of you in 3001, a research paper may be an option. The topic is open, but obviously needs to be relevant to the subject matter of the course. If you choose this option, you must hand in a paper proposal, with sources noted by September 23rd. No research paper will be accepted that has not met this early deadline.
These assignments are intended to get you actively involved in observing and recording what goes on around you as you navigate the urban field. In all instances I'll be looking for evidence of what you are thinking - not summaries of what someone else has already said. All papers will be graded primarily on content. Style will be taken into account as well. Evidence of improvement over the term will be taken into consideration in final grading.

Helpful Hints for Writing for URBS 1001/3001 are provided on the class web site.

**Geog 4001 or 4002: ‘Ways of Knowing’ Courses**

Geography majors meet the “Ways of Knowing” requirement through successful completion of either Geog 4001 or 4002. Currently, 4002 is a WI course. It is eventually to be part of this Writing Plan to “upgrade” 4001 to WI status, depending upon securing permanent TA funds for the course. Below is a detailed illustration of Geog 4002 as a writing course. Departmental writing objectives 1, 3 - 6, and 8 - 12 regularly apply to this course. Objective 2 applies to some student essay topics, but not all.

GEOG 4002 is one of the department’s ‘Ways of Knowing’ capstone courses. As such, it requires students to grapple with some of the key conceptual, methodological and philosophical problems that one encounters in the study of society-environment relations, and the history of attempts to deal with such problems within the discipline of geography. Simply reading and discussing these issues is inadequate: students learn what it means to examine and respond to these questions in and through the process of writing. Assignments are designed in such a way that students must evaluate approaches to these questions by scholars in geography and cognate fields, and come to their own understanding of what is at stake in how these issues are addressed and answered. Critical review assignments teach students how to evaluate the arguments made in key texts that have shaped the study of human-environment relations. The essay assignment helps students develop their ability to shift through and evaluate competing approaches and to develop their own positions vis-a-vis these approaches in a coherent, logical manner, based on a thorough engagement with key figures in the discipline. By the end of the course, students are able to be ‘in conversation' with major thinkers in the field, and able to respond to their ideas critically and creatively. Helping students develop these skills is labor intensive and requires reading and commenting on many drafts of writing assignments.

GEOG 4002 asks students to do four different kinds of writing:
The first is a very simple response to each assigned reading, and consists of a notecard with a summary of the main argument of the reading on one side, and up to three questions about the reading on the other. The second is a set of four critical reviews. Three are reviews of assigned readings; one is a reading of a film. The third is a term paper on a topic of the student’s own choosing. The fourth are two essay-format exams which give the students the opportunity to demonstrate their ability to work with key concepts developed over the course of the class.

Departmental writing objectives apply to the above writing assignments in the following ways (listed by objective):
#1 Students are required to develop a research question for their term paper, which they submit to the TA for evaluation and discussion.

#3 Many students use, interpret, or create visual information in their papers. The TA in the course evaluates their use of this material in their rough drafts, and provides feedback on how visual information can be used more effectively. All students must write a critical review of one of two films screened in the class. A full class is devoted to discussing these films before reviews are written.

#4 As students write their term papers, they must collect material from a variety of sources. This material must be evaluated for its quality. We discuss how to evaluate the quality of sources in class. All students must submit a list of sources for their term paper to the TA, who provides feedback. A second stage of feedback occurs with the first draft of the paper.

#5 Students are required to evaluate the veracity of arguments and conclusions of sources in a variety of ways. Most immediately, they must write critical reviews of three essays and one film during the course. These critical reviews require the students to analyze and evaluate the logic of authors’ arguments, their use of evidence and the validity of their conclusions. They then apply these skills in reading the sources they use for their term papers.

#6 All student writing is evaluated in terms of the student’s use of evidence to support claims. This is especially true of the term paper which goes through several drafts and receives detailed comments.

#8 The composition and organization of all writing in the class is stressed heavily. The term paper requires that students organize their essay in such a way that an argument is systematically developed in a logical fashion.

#9 All writing assignments are graded for writing mechanics. The draft of the term paper is edited heavily to help students develop their writing mechanics. The class TA meets with each student individually to work on this and other components of their writing.

#10 Through their critical reviews of assigned essays, students are taught to recognize what is at stake in the positions that authors take. They then must consider what is at stake in the positions that they take in their own essay for the class.

#11 Students submit multiple drafts of their papers. The TA gives them comments on these. Students are expected to draw upon these comments, but must do more than simply apply them.

#12 Ethical standards for research and writing are discussed and applied to the term essay.

The Geog 4002 term paper is the major writing assignment of the course. For illustrative purposes, here are the guidelines provided to students by the course instructor:

Guidelines for preparation of the Geog 4002 term paper

Organization of paper

For an essay to convey an argument in a coherent fashion, it needs to be well organized. This does not necessarily mean following a formula, but rather, organizing the paper in such a way that your reader is able to follow the flow of your argument. Poor organization often leads to poor writing, because the various parts of the argument do not follow in a logical manner.

A few things to keep in mind:
1. You will need to introduce your topic and your thesis. This is usually done in the first paragraph, although confident writers may use other strategies to draw the reader into their topic. At some point early in the paper, however, you need to set out in as clear a fashion as possible what the paper investigates and what the main argument is that you will be making. It is often a good idea to set out the importance of the topic: why should we bother thinking about it? What is at stake analytically, politically, etc.? Keep in mind that a good term paper develops a single argument (although the argument may have several facets).

2. The body of the essay should develop your argument in a logical fashion. In other words, each paragraph should add something substantive to the case you are building. Moreover, each paragraph should follow in a logical fashion from the paragraph immediately preceding it. Transition sentences are key – they help the reader understand why you are moving from one point to another.

   Hint: if I can take your paragraphs, shuffle them like a deck of cards, and the result doesn’t change your argument, then your paper (a) lacks an argument, or (b) is, in its present state, poorly organized.

3. You should end your paper with a concluding section that summarizes the argument and explains the significance of your conclusions. You should not introduce new material in the last paragraph – it should sum up, not expand, the argument.

Content of paper

Your essay must be your original work. This does not mean that all the ideas in the paper are yours (even the journal articles and books you read borrow ideas from elsewhere – which is why they usually have lengthy footnotes and bibliographies). It means that you have assembled the material and developed an argument based on the material.

The strength of your argument will depend in part on the quality of the materials you gather. For this reason it is important to find authoritative sources. For academic work, authoritative sources are usually those that appear in ‘peer reviewed’ publications (‘peer review’ is a process by which peers evaluate the quality of the work before it is accepted for publication). Most academic journals are peer reviewed. The same is true of books published by university presses (for instance, the University of Minnesota Press).

Integral to writing a successful paper is taking the time to identify and read the best sources. There are various ways of identifying such sources. For instance, journal indexes and library catalogue are helpful. But it is equally helpful to see what sources are most frequently quoted in the literature. If all your sources seem to have read an essay by Timothy Mitchell entitled “The object of development”, then you should probably track this article down. If you are having trouble locating resources, please talk to Emily or me.

Compiling and organizing the information you gather is an idiosyncratic affair – different individuals employ different methods. In the past it was common for people to use a stack of index cards, using each individual card to write notes on a particular topic (for instance, if you are writing about eco-tourism, you might have a card on which you write notes on the
relationship between eco-tourism and class, and another on eco-tourism and Edenic narratives). Today, with computers, you can do similar organizing through folders and files, although the big drawback is that it’s more difficult to visualize the argument as a whole.

Keep in mind that no author uses all the material they gather. Much of it is superfluous. You must choose which points are important, and which are unimportant.

Tables, maps and graphs should always be discussed in the body of the paper. If the figure is borrowed from another source, you must cite the source.

Before you write. Always write an outline before you begin to write your paper. This will help you organize your argument in a logical fashion. You may find that you modify the outline as you write (writing is always a creative experience), but it will at the very least provide you with the general structure of the paper. Organize your notes in a logical fashion, grouping related material together. Try to figure out how each section relates to other sections in the paper.

Writing. The best essays are those that are written well in advance of the deadline. Rushed writing is almost always poor. Give yourself enough time to write in a relaxed fashion, taking breaks to do other things. One of the best strategies is to set an arbitrary due date some time in advance of the real due date. Complete the essay by that date. Then, put it away in a drawer. After a week, return to it: you’ll see it with new eyes and magically find all the areas that need improvement.

Revising. Your first draft will be read by Emily, and she will give you suggestions for revision. It may also be helpful to have a friend read it for clarity and argument before you submit it. You should aim to submit a polished essay for your first draft. Your subsequent revisions will improve it. You will have two weeks for revision. We expect to see a different, improved paper when you submit your final draft. You may find that it is necessary to do some additional research, to reorganize the paper, and to work on your writing. It is possible that you will need to do all three. If you simply submit the same paper you submitted as your first draft, you will receive a poor grade.

References. It is essential that you cite all material that you have obtained from other sources. There are various referencing styles. You may choose the style you prefer, but you must consistently use the same style throughout the paper. Please make sure that your citations are complete (date, volume of journal, page numbers, publisher of books, publication date, etc.)

Grading of term paper. Your final paper is worth 30% of your final grade. The paper will be graded in the following manner:

Organization and content (argument) - 50
Style (clarity of writing, grammar) - 35
References - 15
NB: You cannot receive full marks for the paper if you do not submit all parts (abstract, first draft, final draft).
Appendix II
Incorporation of Departmental Writing Objectives into the senior project Seminar

Students are strongly encouraged to begin planning their senior project with potential faculty mentors and/or the departmental adviser at least one semester prior to registering for academic credit. Students take a minimum of two credits by choosing one of the following three options. Honors students should enroll in the honors version of each option. Enrollment in GEOG 3997/3997H requires concurrent registration in a required or elective course related to the chosen area of specialization. Students double majoring can fulfill their senior project requirement in either major and need do only one senior project. Students must submit a Senior Project Tracking Form to the Undergraduate Advisor in order to graduate.

Option 1 (4 credits)
GEOG 3985W - Senior Project Seminar [WI]
or GEOG 3985V - Honors Senior Project Seminar [WI]

Option 2 (3 or 4 credits)
GEOG 3996 - Senior Project Directed Research
or GEOG 3996H - Honors: Senior Project Directed Research

Option 3 (2 credits)
GEOG 3997 - Senior Project
or GEOG 3997H - Honors: Senior Project

The majority of students choose the route of Geog 3985 V/W, the senior project Seminar, offered each semester. A stated goal of the two instructors who have taken on the responsibility of teaching the course (in alternate semesters) is to aspire to help students produce the best written work of which they are capable, given the constraints of a single semester. Because of their different specific approaches to the course, there is necessarily some variability in how departmental writing objectives are worked into the course. One of the instructors offers the following description: Typically, writing objectives 1, 4-9, 11-12 are relevant to the way I teach Geog 3985W/V. Items 2 and 3 are not necessary for every student completing senior projects, but many students make observations and/or use visual information.

The first task after a student has identified a topic for her/his senior project is to write a statement of problem. I ask the students to identify research questions (item 1) that they wish to answer through the course of their research. They should not know what the answers are to the questions, but they should determine the purpose of their project and what they wish to accomplish. For some of the projects, students make observations (item 2) and use visual information (item 3), but not all topics require field or lab work or an analysis of visual information. In class we discuss different types of references (item 4) as the students prepare an annotated bibliography. They learn that not all sources have to be scholarly, but not all information can come from Internet sources that are not peer reviewed. Students evaluate their references and assess the evidence (item 5) as they prepare their annotated bibliographies. As they write their drafts, they use evidence (item 6) to back up their statements and answer their research questions. I do not assign a specific exercise, however, that teaches students how to support their answers with well-reasoned arguments. We read and discuss some articles as a
class that help us understand differences in audience (item 7). Students decide what audience they wish to reach with their senior project. With their peers, students discuss outlines of their projects, which helps them refine the structure of their papers (item 8). I then comment on the revised outlines before the students begin writing their first draft. Many students have not learned basic mechanics, so I spend an inordinate amount of time commenting on mechanics in the drafts (item 9). I figure that if students haven’t been taught the basics of punctuation, syntax, and word choice, then someone had better call to their attention that they could polish their writing. I would hope that students would have learned mechanics by their senior year, but apparently that is wishful thinking. Revision (item 11) is an essential element of the senior project seminar. Students revise their work based on feedback from peers and from me. (I write detailed comments on each step of the senior projects so that the students know what to focus on. Almost every step of the sequenced assignments that I assign in the senior project Seminar is revised and resubmitted for my comments, so item #11 is very important for the way I teach the class. I divide the students into peer groups to encourage the students to meet deadlines and help each other read critically. Peer review helps students identify effective writing, and it helps them see where they could revise their work to improve the readability. The collection of sequenced assignments, rather than a particular assignment, illustrates how the writing characteristics and abilities apply.) Early in the semester I discuss the IRB (item 12) and the importance of protecting any subjects that the students interview for their projects. Each year I apply to the IRB for exemption that applies to the entire class. I speak individually with students who decide to interview subjects or collect data from people.
### Appendix III
#### Sample Writing Assessment Tools

**GEOG 3381: Research paper feedback sheet**

**General comments and suggestions for revisions**

<table>
<thead>
<tr>
<th>Total points: /10</th>
<th>very good</th>
<th>good</th>
<th>fair</th>
<th>insufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content 1: Supporting empirical evidence, including statistical data (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content 2: Explanation /interpretation of findings (application of concepts from lectures, textbook and other scholarly sources to discuss findings) (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization of paper and clarity and coherence of arguments (3)</td>
<td></td>
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<td></td>
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<tr>
<td>Use of sources (1)</td>
<td></td>
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</tr>
<tr>
<td>Language and mechanical correctness (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Supporting empirical evidence**

*See comments in paper*

**Explanation/interpretation**

*See comments in paper*

**Organization of paper and clarity and coherence of arguments**

- Overall organization of the paper needs to be improved. Revise structure of the paper.
- Some paragraphs contain more than one idea.
- Statistical data not sufficiently incorporated in the paper.
- Introduction to the paper needs to spell out the purpose of the paper.
- Conclusion needs to provide a summary statement and final thought.
- Parts of the essay include excessive or trivial information beyond what is necessary to support your argument.
- Some of the paragraphs and sections of the essay are logically inconsistent and have contradictory ideas.
- Transitions between some paragraphs are abrupt and do not flow well. Or in other words, the connections between some paragraphs are unclear.

*See comments in paper*
Use of sources
- Needs to use more scholarly/academic sources besides internet sources.
- Provide references in the text.
- References to sources in text are formatted incorrectly.
- Quotes are not properly attributed and cited in the text.
- Bibliography has to be provided for citations/references used.
- Reference to tables and graphs needs to be integrated into the text.

Style and tone, language, sentences, wording
- Some sentence structures are too complex, too wordy, or too long. Streamline sentence structures.
- The tone of the essay is too casual (i.e., in spoken English).
- Avoid definitive words like “every,” “all,” and “never” unless you are absolutely sure about them/can substantiate claim.
- Avoid too much passive voice.

Mechanical correctness
- Avoid abbreviations such as “isn’t” or “doesn’t.” Spell out these words fully (i.e., “is not” or “does not”).
- Some grammatical errors.
- Some spelling errors
- Some typos
- Citation/bibliography format must be modified or corrected. Citation of references in the bibliography must follow a uniform format.

Other issues
- No title!
- Too long.
- Too short.

Advice
You should consider taking your paper to the Center for Writing (main location: 15 Nicholson Hall) before submitting the revised paper. You need to make an appointment before seeing a writing tutor - visit http://writing.umn.edu/sws/index.htm for details. Writing support is also available at the SMART Learning Commons (Wilson Library or Magrath Library, M-Th 2:30-5:30 pm), Frontier 109 (M-W, 6:30-9:30), or Sanford 188 (M-W, 6:30-9:30). Even if you decide not to go to the Center for Writing, ask someone to read your revised paper before submitting it.
Geog3401: Geography of Environmental Systems and Global Change

Grading rubric for Preliminary Bibliography – Geog 3401
Total possible points: 25

My main objectives for this part of the term project are to get students to find relevant literature from a variety of sources, to read the sources well enough to have an idea about what’s in them, to begin to recognize (in at least a general way) the differences between wiki-like entries and more scholarly works, and to learn how to cite stuff appropriately. I want to provide enough feedback on the preliminary bibliographies so that over the course of the rest of the semester they will improve on all these things.

1) Students should state the location they have chosen for their project and must have a minimum of 10 sources that (as near as you can tell) are relevant for this project/that location. Students should have included a brief description (a phrase or sentence is fine) as to what kinds of info each source can provide. Sources should include at least one scientific/academic source, and at least one federal/state/local government source. General books, newspaper articles, etc., are fine at this stage. If there is a preponderance of newspaper or magazine citations, note on the paper that these sources are insufficient as the primary source material for the project. At this stage they can include a Wikipedia entry or a citation to Joe’s climate blog, but I will do my best in the future to underscore the potential hazards of such sources – not that they can’t be useful but that they are not always the most reliable; but then is the scholarly literature more reliable? Oh, it’s so confusing.
   • -2 points for every source less than 10 (can give extra points if more than 12 sources)
   • -1 point for every source that does not include a brief statement about the info it provides
   • -2 points if there is no academic/scholarly source (journal article, scholarly book, etc.)
     • -2 points if there is no government source (document, map, data, etc.) (federal or state or local)

2) Citations should be formatted using a reasonable and consistent citation style (MLA, Turabian, etc.) – I generally don’t worry about the style used as long as all information is provided, including the names of all authors (not et al.), date, title, source, volume, page numbers, DOI (if appropriate), URL (if appropriate). On this part of the project I cut students some slack for citations to web sources but you should indicate on their papers if their cites are lacking necessary information (and what that is). (Just do this once as an example, and then say they should follow that example to correct the rest.)
   • -3 points if their bibliography is clearly a cut-and-paste job
     • -1 to -3 points if their citations are missing necessary information (depending on how egregious the violation)

   (Based on past experience, most grades will probably be in the 18-22 point range.)

Grading for Annotated Outline – Geog 3401
Total possible points: 25
My main objectives for this part of the term project are to find out what students are thinking about including in their term projects, and to alert them to things they should include for their final papers. Because everyone has a different site for their projects, there will be different things that they’ll need to consider depending on the location.

For the Current Environment section, they should be talking about including things like:

- current vegetation (pre-settlement, agriculture, lawns, urban veg, etc.)
- current climate (temperature and precip, water balance re: WIMP, midcontinent vs. coastal location, etc.)
- soils/topography/geology (is topography important, is this a floodplain, is soil erosion a problem, etc.)
- what humans are doing here (urban, suburban, rural; are there flood control structures; is there tile drainage for agriculture; is this a place with lots of impervious surface, tall buildings, etc.)

For the Change section, they should be looking at the IPCC document that I linked from the Term Project web page, to get info on the temperature and precip change for their region. They will need to do a WIMP run for this section, so if they don’t mention it, please note this on their papers.

For the Consequences section, they would use the results of the Change part (temp, precip, water balance) to infer some things like: whether soils will be wetter or drier (leaching, etc.), whether there will be more, and/or more intense, heat waves, floods, droughts (and consequences for plants, animals, humans), what implications there might be for urban heat islands, if more precip or snowmelt might overwhelm storm sewers in cities, that sort of thing.

Since the only stuff we’ve really done so far in class is the climate stuff, that part should be reasonably well described but you will have to cut some slack on the topography, soils, and veg parts. They should have done some research to find out what their location is like from the point of view of infrastructure (drainage or irrigation systems for agriculture; impervious surface, population change, water control and so on for urban areas; and so on).

Depending on the location, make a note on their papers about things they should consider as they go on with their research, but don’t knock them down for it.

This assignment is pretty close to a yes-or-no kind of grade:

- Full credit: they took the assignment seriously, gave it a good shot, and wrote some things beyond just reiterating what the term project handout says should be included in these sections. Ok if they are thin on the parts we haven’t covered in class yet, but they should at least mention them.
- 1-3 points off: they took the assignment sort of seriously, but are missing things easily included regarding current climate and climate change and/or haven’t even mentioned stuff we haven’t yet covered in class.
- 3-5 points off: they made a stab at it but mostly just reiterated what the term project handout says should be included in these sections, and haven’t made a clear effort to look for things that are important for their particular location.

Based on past experience, most grades are likely to be in the 22-25 point range.
Grading for Rough Draft – Geog 3401
Total possible points: 60
By this point students should have completed a reasonable chunk of their Current Environment section. Because everyone has a different site for their projects, there will be different things that they will include. I would look for each paper to have some information about all of the following, though:
• Vegetation (pre-settlement, agriculture, lawns, urban veg, etc.)

• Climate (temperature and precip, water balance re: WIMP, midcontinent vs. coastal location, etc.)

• Hydrology (rivers, oceans, snowpack and snowmelt, flooding, etc.) (could be folded into the climate discussion)

• Soils/topography/geology (is topography important, is this a floodplain, is soil erosion a problem, etc.)

• What people are doing here (urban, suburban, rural; are there flood control structures; is there tile drainage for agriculture; is this a place with lots of impervious surface, tall buildings, etc.)

It is ok if they don’t have complete information (this is a draft after all) but they should have something about all of these things, or at least state what they plan to talk about for these items. Their drafts should be in the ballpark of 3-4 pages of double-spaced text, excluding graphs, photos, tables, etc. They should be citing their sources, should have a logical organization to their paper, and should have minimal typos or grammatical errors.

Grading: In the past I have done this based on the number of minuses I noted on the grading sheet. I would say deduct five points for each one (if all of them are minuses, they still get 15 out of 60 points for making an effort, I guess). If a student has done a particularly good job of something and got a plus, add three points back to their score but don’t go over 60.
**GEOG 3985V/W: Senior project seminar**

The criteria used by the instructor to evaluate writing in the senior project Seminar differ for each of the sequenced assignments. Here is a list used for the complete draft:

**CONTENT**
- Logical, concise introduction of your research topic
- Clear statement of hypothesis/objectives/thesis statement/research questions (refer back to your statement of problem and the suggestions of your peers when revising this section)
- Description near the end of the introduction of the topics that you will discuss in the paper (in the order that you will discuss them) so that the reader knows how you will test your hypothesis/address your objectives/support your thesis statement/answer your research questions
- Logical development of ideas throughout the paper
- Thorough yet concise discussion of all aspects that you outlined in your introduction
- Clear sense throughout your paper of how your study is geographical
- Strong conclusions

**CITATIONS**
- Proper notation of in-text citations, including electronic sources and personal interviews
- In-text citations wherever needed (wherever you have paraphrased or quoted material from outside sources)
- Bibliography in one of the formats discussed in the revised annotated bibliography handout (Turabian and Chicago are the preferred styles)
- List of references in alphabetical order
- Adequate sources cited to support your arguments throughout the paper

**MECHANICS**
- Grammar
- Word choice
- Spelling (run a spell checker to catch typos and misspellings)

**Urbs 3751: Understanding the Urban Environment**

An example of a technical memo assignment: Air Assignment

**Purpose:**
The purpose of this assignment is to get you to investigate and report on air quality within your neighborhood and within your broader community. There are many different web-based databases to investigate air pollution and you will be directed to several in order to complete this assignment.

The goal of the assignment is for you to investigate smog and soot (criteria pollution), toxic chemical releases, and air pollution that cause health risks (Hazardous Air Pollution – HAPs).
Your report should demonstrate that you understand these categories of air pollutants and that you understand the role that point, area and mobile sources of air pollution play in your neighborhood's air quality.

You will look not only at broad readings for your zip code or county; but also investigate at least one point polluter. Additionally, you should reflect on how local vegetation, topography, and dominant wind direction might affect your exposure to air pollution. Although there might be pollution sources in your mesoclimate (county), attributes of your neighborhood (parks, open space and vegetation, location of streets/freeways, proximity to area sources such as gas stations) can mitigate or magnify pollution at the micro scale--your household.

Using the following data sources, compile a 3-4 page typewritten technical report of air pollution in your community. Write your report in a memo addressed to me. Give an overview of air pollution sources and health hazards in your neighborhood. Paper due at the beginning of class March 4- discussion for the day will be based on your reports. You may work individually or in a group -either from same zip code or compare/contrast zips (longer report need for compare/contrast). Yu should demonstrate that you understand the categories of air pollutants that you are investigating. Read your papers aloud to catch grammar/word choice issues. Do not copy from web sites -- I can tell when you are not using your own words. Also, cite your sources at the end of your assignment.

Websites citation example:

http://www.scorecard.org/about/about.tcl

Please attach a map of your neighborhood - you can print out a simple map from Google maps and write on it! Make sure you show where your house is located as well as the location of air pollution generators in your neighborhood (don't forget the major streets or local area sources).

For a rough determination of your risk of exposure, look at a wind rose for your community to see if you are downwind pollution sources in your community.
http://climate.umn.edu/wind/windRoseClimatology.htm
How to interpret a wind rose:
http://www.freshwater.org/animated_classroom.html
Sources of information:

1. First of all, to identify Criteria polluters in your neighborhood you can use a search engine on the MN PCA's web site:
http://www.pca.state.mn.us/data/edaAir/locationSearch.cfm

Choose your county and then city from the pull-down menu. This will bring up a list of the top emitters of criteria pollution in your community. Print this page as it will help you do more detailed searches on the next data source - Scorecard. However, if you do not get a list of point sources then you will need to use the county data from Scorecard (#2) below. Additionally, if you are using non-MN locations Scorecard covers the entire US so you will be able to find your community.
2. Scorecard: [http://www.scorecard.org/about/about.tcl](http://www.scorecard.org/about/about.tcl) Read about Scorecard and then click on “Zip to your Community”
Enter your zip code and you will get to a long list of possible reports for your county.

Investigate the following reports:

A. Smog and Soot: How Much Air Pollution is Released in Your Community? (this report is under AIR part way down the page) Scroll down to the table at the bottom: "Emission summary of criteria pollutants" - Add up the emissions across criteria types to see whether point, mobile or area sources are responsible for the majority of criteria pollution in your county. Scroll up the page to the link for Rank Facilities in your county – you will get to a list of facilities and a pull-down menu for each of the criteria pollutants. Do any of the facilities you pulled up on #1 show up here?

B. Air Pollutants That Pose Cancer and Other Health Risks: Click on "see where your county stacks up" --note where your greatest risks are – Mobile, Area or Point sources and note what your average added cancer risk is from exposure to air in this county and report on what the source of your added cancer and non-cancer risks are.

C. Toxic Chemicals Released by Factories, Power Plants and Other Industrial Companies: Click on "see how your county stacks up" to see a broad report on your county. Scroll down the report until you get to the link "Toxic Releases Inventory" Read this to understand what is and is not covered by the Toxic Release Inventory (TRI). Go back to your county report and scroll down the report until you get to the "TRI Data Summary". Click on the total release # for air releases and you will see a list of chemicals that are released in your county. On that page you can click on "see a list of facilities" and you will get a list of facilities releasing toxic chemicals to the air in your county. You can use the pull-down menu to look at a variety of release types such as "recognized carcinogens to air" Using one of the air release categories click on the name of a facility that is located close to your residence. Scroll down to the "Toxic releases inventory" and click on the # for air releases - investigate and report on the chemicals released by this facility as part of your technical report to me.

Email me with any questions…..

Urbs 3751 - Individual Air Paper – grading rubric (all take one of three values, Not at all, Partial, and Clear): Intro (5), Criteria (10), HAPs (10), Toxic releases (10), Discuss sources (10), Conclusion (5), Synthesis (10), Map (15), Total Possible (75)
5. WEC Writing Plan Requests

Unit Name: Geography, Environment, and Society

Financial Requests (requests cannot include faculty salary support) drop-down choices will appear when cell next to "semester" is selected

Total Financial Request: $21,338.00

<table>
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<th>Item</th>
<th>Cost</th>
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<th>Cost</th>
<th>Item</th>
<th>Cost</th>
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<tbody>
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<td>Research assistant</td>
<td>$7,628.00</td>
<td>Research assistant</td>
<td>$5,976.00</td>
<td>Research assistant</td>
<td>$7,734.00</td>
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<td>Semester 1 Total:</td>
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<td>Semester 3 Total:</td>
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Rationale for costs and their schedule of distribution

We seek WEC support for a research assistant who will help revise and expand five elements of our plan implementation (Section 5): writing guide, exemplar projects, student information brochure about the writing plan, preparatory workshops for senior projects, and pathways to the senior project documentation.

Service Requests drop-down choices will appear when a cell in the "service" column is selected

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<tr>
<td>Workshop</td>
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Description and rationale for services

Writing guide: we would seek advice on structure and resources (e.g., on plagiarism, writing across disciplines). Exemplars: we would seek advice choosing examples (e.g., we spoke to WEC about choosing a range of best, OK, and poor cases). Workshops: we would seek advice on structure and resources, or other avenues that we should explore (e.g., offering discipline-specific workshops that complement more generic writing workshops offered in other venues).
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Semester 4 Total: $0.00  
Semester 5 Total: $0.00  
Semester 6 Total: $0.00

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January 9, 2014

To: Steven Manson, Geography, Environment, and Society
From: Robert McMaster, Office of Undergraduate Education
Subject: Decision regarding WEC funding proposal

The Department of Geography, Environment, and Society recently requested the following funding to support its Writing Enriched Curriculum:

<table>
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<tr>
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<td>Spring 2014</td>
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<td>Summer 2014</td>
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<td>$5,976.00</td>
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<td>Fall 2014</td>
<td></td>
<td>$7,734.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$21,338.00</strong></td>
</tr>
</tbody>
</table>

This request has been approved by the Office of Undergraduate Education, for a total of $21,338.00. Please provide Pat Ferrian (ferri004@umn.edu) with your department’s EFS information so the funds may be transferred.

CC: Suzanne Bardouche, Will Durfee, Pamela Flash, Pat Ferrian, Molly Bendzick, Jules Thomson, Tim Gustafson