

Basic Instructions for Course Projects

Project Proposal, First and Final Versions (prepared jointly by the team)

The aim of the project proposal is to establish a firm foundation for the course project. The team should **review literature, particularly with regards to methods, and extensively examine data** to develop a strong grasp both of the research problem being addressed, and of GIS implementation.

The project proposal clearly frames the research problem and covers in detail how the problem will be addressed by the team. It is unlikely that the final project will unfold exactly as specified in the proposal. Nevertheless, a strong research proposal at least ensures that adjustments and changes in direction will be made in an informed manner.

Please refer to “Components of the Research Proposal” for detailed instructions. **The proposal should be approximately 3,000 words**, not including tables and figures. Try to write briefly and succinctly. A report that is much greater than 3,000 words usually indicates lack of understanding of the topic, and is often poorly written.

Prior to submitting their research proposal, each group is required to meet with me *at least once* as a group to discuss their plans.

Your team will submit two versions of the project proposal:

1. The first version must represent the best work that could be accomplished during the time available; **it is not a rough draft!** It will be evaluated quickly and returned so that you can make revisions.
2. For the second version of the project proposal, incorporate comments from the first version, and literature support for problem context and research approach should be well addressed.

In preparing the project proposal, keep the following additional points in mind:

- Students are encouraged to share resources (e.g., literature, websites,).
- **A minimum of 15 references from refereed journal articles is required.** You may use whatever additional resources you require, e.g., books, book chapters, conference papers, web sites.
- We expect that all written work submitted for this course will be of high quality. This means that your project proposal should be free of spelling and grammatical errors, well organized, clearly written, and properly supported.

Key components of the project proposal

Project title

Develop a concise and informative title, indicating using GIS and your study area.

Problem context

This portion of the proposal should have three components: Problem definition and significance of the research problem; state of knowledge and research gaps; and Importance of GIS applications in your research project. **You need to review pertinent literature to support your discussion.** The discussion should provide enough details to allow the reader to recognize and evaluate the importance of the proposed work.

Purpose of the research

This is an unambiguous statement that sets out the overall aim of the work (preferably in one sentence).

Research objectives

These translate the overall purpose statement into several specific, manageable tasks (at most four or five objectives).

Study area

Establish the boundaries of the proposed work. The specific location of the study area may change, but by suggesting one at this stage, you will give a clear indication of the *scale of the analysis*.

Research approach

Briefly discuss the overall approach that will be used. Then elaborate by explaining the variables, GIS tools, and techniques that will be used to address specific objectives. **Ensure that you have sufficient literature to support your discussion.** Explain both what your team will do and why that is appropriate -- relative to the problem, the objectives, and available data.

Data needs

Define data needs in terms of the objectives that have been identified. A particular data source can be used to address multiple objectives. Discuss any formatting, conversion, etc., which will be necessary. Make sure that you explain how the data that you've identified will be used. This explanation should be **consistent with your research approach**.

Expected results

Provide a realistic appraisal of the results that can be expected. All analyses will have strengths and weaknesses. To what extent will the proposed analysis address the problem identified?

Work plan

Outline the expected timeline for the various components of the project and how they will be addressed. The work that **each team member** will perform should be clearly identified. Each team member must make a substantive contribution to all portions of the project. For instance, it is not appropriate for one person to perform only data creation.

References

A minimum of 15 references from refereed journal articles are required. You may also use whatever additional resources you require (e.g. books, book chapters, conference papers, web sites, etc.). Make sure that your reference list follows consistent formatting.

Project Report, First and Final Versions (prepared jointly by the Team)

The project report summarizes the work conducted for the project. Again, your team will submit two versions of the project report. The first version must represent the best that could be accomplished during the time available. **In particular, comments for the proposal should be incorporated and research approach should be well documented.** It will be evaluated and returned quickly so that teams can make final revisions. **You should expect that you will need to make some revisions to your actual GIS work.** However considerable additional work should not be necessary, unless you've done a very poor job in the analysis, or in writing and presenting the first version of the report.

All reports will be prepared as web pages using a standard template that I will provide. In preparing the report, it is quite appropriate to draw heavily on the project proposal. In most cases, the research that was conducted will not have unfolded exactly as described in the proposal! Nevertheless, you should be able to draw on earlier work for much of the background material -- supplemented by subsequent research and analysis.

Your project report should be presented in a format that is attractive to a wide audience. Therefore, you should make use of maps, figures, and other graphics. Text should be written clearly, and with a minimum of jargon. There should be enough information for the reader to understand the project and the findings, without being overwhelmed by details. **Typically, the report should be approximately 3,000 words**, not including tables and figures. It can be longer if this is necessary, but try to write briefly and succinctly. A report that is much greater than 3,000 words usually indicates lack of understanding of the topic, and is often poorly written.

Examples of reports prepared during the previous offering of this course can be viewed at the following address: <https://www.uoguelph.ca/geography/>. Hover over the **Undergraduate** tab to find past GEOG*4480 project links.

Key components of the project report

Project title

Abstract

A short summary that explains the main problem, research approach, and findings of your work. It should be around 300 words or less. No references should be used in abstract.

Problem context

Purpose of the research

Research objectives

Study area

Research approach

The final methodology (which may end up being different than your original proposed approach)

Research findings

Discuss the results and outcomes for each objective.

Conclusion

Summarize the key findings of your research, including its strengths and limitations.

References