

## Individual Research Project

A research paper is an essential part of this class. It has several purposes. First, it will support one of the major objectives of this class, namely to provide you an opportunity to demonstrate your understanding of scientific and geographic methods developed in your program of study. Second, the interdisciplinary nature of this class leads to a broad distribution of academic backgrounds among the students, and a research paper allows me to tailor the course material to the interest and capabilities of individual students. Third, it is well known that learning works best when new material is experienced with questions in mind, or with an explicit need to understand this material. Working on a paper throughout the course will hopefully provide you with a personalized understanding of the material. Finally, you will learn/practice your skills in scientific writing – including forming a research question, literature search, referencing, etc.

### Topic

You will choose a topic yourself with the approval of the instructor. The following are interrelated requirements that your paper should fulfil:

- (1) Your paper should directly relate to course material and be **original** material for this class. GEA4275 students must focus on issues involving South Florida
- (2) You must formulate a **research question** that your research addresses and that connects with your academic service-learning project/practical. Descriptive papers are not sufficient.
- (3) There must be **both a human and environmental** context. For instance, a paper that addresses purely environmental questions is not sufficient. Your paper must connect humans with the environment.
- (4) Your topic must involve the acquisition, analysis and synthesis of primary OR secondary data sources. GEA6277 students must collect your own data, that is use primary data, unless otherwise approved by the instructor. A summary of other researchers findings is not sufficient
- (5) Geography majors must include spatial analysis and geographical information utilizing cartography, GIS and/or remote sensing methods.

The ideal paper will build on your own personal background skills and knowledge, and will challenge you to learn something new, related to course material.

Example questions:

- What will be the impact of sea level rise to South Florida's emergency evacuation routes?
- Can engineered wetlands be used to reduce the GHG emissions for a municipality, company, school, etc.?

- What human vectors contribute to invasive species in South Florida/Everglades?
- How can humans and nature both benefit from green corridors in urban areas?
- Can the urban heat island affect be reduced using green roofs?
- How have humans contributed to soil subsidence in the greater Everglades region
- What relationship exists between vegetation and gopher tortoise burrows in the FAU preserve?
- Does anthropogenic pollution increase Fibropapilloma in sea turtles?
- Do weirs/jetties affect sea turtle nesting habitat in South Florida?

### **Level**

The level of the paper should be such that your peers will be able to read, understand and appreciate the paper. This means that material must be explained at the level of upper undergraduate (GEA4275) and graduate (GEA6277) level. Exclusively stating facts without explanation or discussion is not sufficient.

### **Length**

Twelve to fifteen pages (GEA4275), fifteen to twenty (GEA6277) is a good length (double-spaced, 12 pt Times New Roman). This includes all pages; title, abstract, contents, figures, tables and bibliography.

Avoid a broad review of what is probably a big research field. **Ideally, your paper has one very clear (small) focal point.**

### **Basic Structure**

In general, your research paper can be broken down into the following constituent parts.

- Title/authors
- Abstract
- Table of contents
- Introduction/literature review
- Methodology
- Results and discussion
- Conclusions
- References/citations
- Appendices (optional)

## **Format**

Must be in APA writing style

## **References**

The final version of your paper shall **contain references to at least five relevant *original* research papers, which should not be older than 5 - 10 years.**

## **How to find sources**

This will be discussed at the writing workshop in the FAU Library during a class meeting

## **Getting started and approximate time line**

### Step 1 (Weeks 2-3)

Decide on a topic area.

### Step 2: (Week 4)

Formulate a specific research question that you will need to answer to enable you to write the paper.

### Step 3 (Week 5)

Preliminary bibliography (including at least five original articles).

### Step 4 (Weeks 6-7)

Tentative paper outline (headlines followed by bullet-point type content descriptions)

### Step 5 (Week 9-10):

Submission of a draft for review by two of your peers

### Step 6 (Week 10-11):

You will give feedback on two student's papers, and you will receive feedback from those students. Allow at least a week between submission of your draft and expecting feedback

### Step 6 (Week 13):

Implement all feedback and submit the final draft, a very brief summary of changes made, and the original first draft (with feedback notes).

### Step 7 (Week 13-15):

Oral presentations, 15 minutes long - GEA 4275

Poster presentations – GEA 6277