EOSC 442 Final Project: FINAL PAPER
Guidance and expectations.
BE SURE to check the RUBRIC at the end of this document

Paper:

Scientific papers are a common format by which scientists exchange information. The main purpose of a paper is to communicate the work you have done for your group project in a coherent, clear and interesting way.

The paper will be **8-15 pages** (not including figures or references), double spaced in **12 point** font. It is **preferable** to submit the paper in .doc or .docx format but PDF is OK.

Here's what should be on the paper. *Please label each section clearly.*

- **TITLE** (not labelled): The title of the paper (make it as succinct as possible).

- **WHO YOU ARE** (not labelled): Write all group members' names, student number **and your group number**.

- **ABSTRACT**. includes (~ 100 words) the research question, describes the data used and the analysis conducted and states the main finding. This should clearly summarize the main points of your paper: What phenomena you are studying and why. How you studied it and what you found.

- **INTRODUCTION**: contains an explicitly articulated research question that drives your analysis, the importance of the question, a context for the question and an explanation of why the question is interesting.

- **METHODS**: describes the data set and its origins/source completely, including a description of the phenomena or processes represented. Includes full details of the analysis including all steps of preparing the data for analysis, with explanation for each.
  WHAT DATA DID YOU USE AND HOW DID YOU ANALYZE THESE DATA? This section is a summary of what you have included in your Topic and Preliminary Analysis assignments. Here you won't just copy and paste but find ways to extract and communicate only the key points.

- **RESULTS AND DISCUSSION**: Results includes results of the analysis and conclusions drawn from the analysis, including graphs (**RAW** and **ANALYZED** data) and tables while the discussion provides an interpretation of the results based on the context and importance provided in the introduction. **Please make sure you include your raw data in a figure (or table) as one of your original figures. Also make sure to show a map of your location if necessary (this would normally be figure 1).**
  YOUR DATA/RESULTS. Always show a graph of the raw data before you manipulated it in some way. Sometimes this can be plotted behind another graph. For example, if you generated a trend line by taking monthly averages you could plot the raw data with the trend line over it is a stronger colour or bolder line. If it is helpful, consider annotating your graphs to highlight key finding or areas or importance. For example, you could add a shaded transparent box to highlight a section of data over time, or you could put an arrow or line to indicate a critical threshold value. This might be a way to visually link graphs that are stacked on top of each other.

- **CONCLUSION**: summarizes / restates the take home message(s) of the work done.
  WHAT DID YOU FIND AND WHY/HOW DOES IT MATTER? This section should include a summary of your results and a brief discussion. Here you need to focus on what you perceive to be the important points coming out of your analysis. You can close this section with one or two sentences of conclusions, which should be a synthesis/summary of key points already raised.

- **REFERENCES**: includes only peer reviewed journal articles (or reports if they have provided data). All references must be cited properly and listed in full at the end of the paper.
  Make sure to list the full reference for the papers you choose and include any references you used.
  Use the APA system: http://www.library.ubc.ca/pubs/apastyle.html.

- **TABLES AND FIGURES:** include all your tables (these first) and your figures. Each should be labelled (Table 1, Table 2, etc……..Figure 1, Figure 2, etc.). Make sure that you reference your tables and figures in the body of your paper (In figure 1, we see…..etc.). **All table and figures needs to have a legend** (one for each) describing what is being displayed in the figure and what is important (if applicable). If your figure is taken from a source, make sure to reference the specific source in the figure legend.

Advice on writing final project.

- REMEMBER: your first figure(s) needs to include:
  - Map of data locations (if permissible)
  - Time series of all your RAW data (minus the missing data flags) showing just the points of data.
- OK to use point form for sections where appropriate
  - **Remember this is not a full paper but more of a poster in project form.**
  - **Keep your information SUCCINCT. Give only what the reader needs to understand your project (they can follow the reference if they want more detail).**
- No need to outline what you did in Matlab in abstract
- Make sure to make your figure fonts big and readable.
- With figure legends, they go below the figure.
- With tables, the table legends go above the tables.
- Make sure your linear correlation equation and r^2 values are on your figure.
- Designate whether the correlation is significant in your figures.
- OK to put tables and figures near the location where they are mentioned in the project (like in a poster).

Expectations:

Your papers will be evaluated by your Instructor and your TA's, using the following:

Rubric for marking EOSC 442 Papers

Paper	Exceptional (80 – 100% of possible marks)	Meets Expectations (60-80% of possible marks)	Needs Improvement (50-60% of possible marks)	Inadequate (050% of possible marks)
Organization and clarity (4 points)	Logical, smooth flow of information in paper; main points clearly stated and explained	Logical, smooth flow of information in paper; main points stated but some gaps are evident	Paper jumps between disconnected topics; main points unclear	Organization detracts from the paper
Content (7 points)	Content thoroughly presented/ analyzed in an interesting, knowledgeable way; key points clearly expressed and integrated with logical links; presented appropriate, forward-thinking insights	Content presented in an interesting way, some key points linked, but others left "hanging"; paper may lack clear synthesis and/or insight	Content patchy, lacks specific important information; little effort to synthesize key points	Significant aspects of content missing or inappropriate
Tables and Graphs (3 points)	Well-selected graphics, all clearly related to the topic and make it easier to understand	Well-selected graphics; graphics support ideas presented and most make it easier to understand	Graphics not connected to topic and/or poorly ordered; too much or not enough detail; distracting	graphics missing or inappropriate
Mechanics (grammar and spelling) (2 points)	No errors	minor errors	Some errors	Numerous errors
Overall effectiveness (2 points)	Well organized, easy to follow discussion of topic. Good level of material and analysis.	Generally well organized with a good level of content	Content is disorganized and sometimes hard to follow and could use some more detail or analysis	Content and discussion difficult to follow or understand. Too simple.