

**BIO332: Project Proposal**

**DUE: 2/28/19 @ 11:59PM**

**Course Projects:**

The course project will be to recreate a bioinformatic analysis done for a recent primary research article that uses Nanopore sequencing data and will consist of:

- 1) A written project proposal (See Below)
- 2) An oral presentation of the proposed research
- 3) Code to reproduce the analyses
- 4) A final project presentation.
- 5) A Term Paper describing your work and findings.

**Proposal Guidance:**

A research proposal (2 – 3 pages) is a plan for research that covers:

- 1. The study you intend to replicate.
- 2. Discussion of the biology surrounding the study with appropriate citations of related literature.
- 3. Annotated methods including where the primary data are available and details of the bioinformatics tools use to process the data reported in the original study. This should include links to all data and software as well as citations for literature describing the software tools, and a narrative about what each step is supposed to be doing. You also need to describe what the main results are and describe how you intend to visualize these (You will use R, but do not need to describe that in detail yet). Data visualization may differ significantly from what was presented in the original study and is up to you depending on what you are most interested in about the paper.
- 4. An initial reference list and appropriate in text citations using the Harvard citation style (See “How to Cite a Journal Article in Harvard Formate”:  
<https://www.mendeley.com/guides/harvard-citation-guide>) .

**PROPOSAL RUBRIC**

	<b>Score</b>
<b>Statement of the problem (5)</b>	
<b>Evaluation of Literature (5)</b>	
<b>Annotated Methods (5)</b>	
<b>References (5)</b>	
<b>TOTAL POINTS (20)</b>	

## **Description of Rating Scale**

### **Statement of the Problem**

- 5: The problem statement is concise, includes descriptor variables and informs the reader of the exact purpose of the study
- 4: The statement of the problem includes most of the descriptor variables and informs the reader of the exact purpose of the study
- 3: The statement of the problem includes 1 descriptor variable and informs the reader of the purpose of the study
- 2: The statement of the problem is unclear and does not include any descriptor variables
- 1: The statement of the problem is missing or is unclear and unable to be interpreted

### **Review of Literature**

- 5: The review of literature is appropriate, provides background information and a critique of previous research that points out weaknesses, conflicts and areas of needed study
- 4: The review of literature is appropriate, most background information provided, critique points out some but not all of the areas of needed study.
- 3: The review of literature provides most of the background information
- 2: The review of literature provides some of the background information
- 1: The review of literature is provides little of the background information

### **Annotated Methods**

- 5: Contains information that allows the experimental analysis to be replicated, the techniques used in data collection and processing in the appropriate chronology, does not contain unnecessary wordy descriptions of procedures.
- 4: As above, but contains unnecessary information and or wordy descriptions within the section
- 3: Presents an experiment that is replicable, all information in document is related, however, fails to identify some sources of data and/or represents information that is disorganized.
- 2: Presents an experiment that is marginally replicable; parts of the basic design must be inferred by the reader; procedures not quantitatively or clearly described.
- 1: Describes the experiment poorly in a non-scientific way such that it cannot be replicated

### **References**

- 5: Reference list is relevant, complete and broad enough to support the Introduction and is in correct Harvard format. All in text citations are included where needed.
- 4: Reference list is limited or in-text citations missing and is in correct Harvard format
- 3: Reference list includes non-relevant articles or is not in Harvard format
- 2: Reference list is incomplete and format is incorrect
- 1: No Reference list is included