UC **SANTA BARBARA**
Bren School of Environmental
Science & Management

EDS 223: Geospatial Analysis & Remote Sensing

Core grading principles

Each assignment will provide specific details of the point breakdowns per question. However, we will follow the general principles below for all assignments.

- **Code must run**
  - 50% deduction on each section that doesn't run
  - 20% deduction from entire assignment for code that does not knit
- **Show your answer and thought process**
  - Logical steps and checks are needed for full credit.
  - Mysterious or disorganized code without checks will not receive full credit.
- **Answer for yourself**
  - Although you are encouraged to collaborate with up to 2 classmates, you must provide your own answer to any non-code based questions
  - All members of your group will lose full credit for non-code based questions that are copy/pasted among group members.
- **Submit assignments through GitHub Classrooms**
  - All assignments should be submitted through GitHub Classrooms
  - 5% deduction for assignments not submitted through GitHub Classrooms
  - All students are granted one free pass

Assignment rubric

In addition to the core principles outlined above, each assignment will be scored for its adherence to the following coding best practices. The maximum deduction for assignments which meet all the core principles but do not follow best practices ("worst case" below) will be 20 points for the assignment. Partial deductions will be given for assignments in between the "best case" and "worst case".

Best case [no deductions]
- Code is concise and easy to read
  - No stray variables (e.g. variables that are defined and never used)
  - Variable names make sense
  - Generally follows the [tidyverse style guide](#)
- Code is commented thoroughly and clearly
  - Every section has an overall explanation
  - Every operation has an abbreviated explanation
  - Any key steps or options are flagged in-line
- Code includes [self-checks](#)
  - Each piece of analysis includes tests to inspect results
  - Includes comments to explain each test
  - Output is intuitive and well-explained
- Outputs are easy to understand
  - Plots have appropriate axis and legend labels (e.g. don't use variable names)
  - Maps have scale bars and compasses
  - Tables are output using formatting utilities (e.g. kable)
  - Includes print statements clarifying output
  - Does not output irrelevant information or full datasets

Worst case [maximum 20 point deduction]
- Code is challenging to understand
  - Lots of stray variables
  - Unintuitive variable names
  - Does not adhere to [tidyverse style guide](#)
- Code is minimally or poorly commented
  - Only some steps are commented
  - Comments are uninformative (e.g. are redundant with code)
- Code includes few, if any, [self-checks](#) or are poorly formed
  - Checks don't perform desired test
  - Checks don't demonstrate critical thinking of the analysis at hand
  - Outputs are difficult to interpret
- Outputs are difficult to understand
  - Plots use automatic options (e.g. variable names as axis titles)
  - Tables are output by default
  - Outputs without print statement explanations
  - Lots of extra outputs not relevant to the question