## Lab Practical (aka Midterm) Study Guide

The lab practical is open-resource, meaning you can use the internet, ArcHelp, your notes, previous labs, and the like. You may not communicate with other students enrolled in the course. TAs and the instructor will not be able to help answer these questions either.

You will be expected to know the following:

- The format of a vector file
- The format of a raster file
- The difference between a projected coordinate system and a geographic coordinate system, and how to identify which format a file is stored in
- When to use 'define projection' and when to use 'project' in ArcMap
- How the 'clip' function works
- How the 'erase' function works
- How the 'buffer' function works
- What characteristics the following map projections preserve:
  - o Equal Area
  - o Conformal
  - o Equidistant
  - o Azimuthal
- How to Select by Attributes
  - Including writing correct queries with the SQL tool
- How to Select by Location
  - Including how to select intersecting features
- How to use both selects together to find a feature of interest
- How to calculate the area of a polygon
- What the geoid is, and how datums represent it