**GEOS 113 – Lab #1 (20pts)**

Each lab this term is worth 20 pts and most will be multipart. Some labs will be completed entirely outside of class (no in-class meetup), and in those weeks your instructor will send out announcements as reminders. Now, let’s explore some examples of GIS applications and tools you have access to in your daily life!

**Prelab (complete PRIOR to your lab session) – this will be checked at the beginning of lab**

Using Google Earth on your computer or mobile phone, determine the cities located with the following GPS coordinates (1pt each). You can copy/paste each of the coordinates into the search bar to find the location name.

1. 22° 53’ 26”S, 43° 10’ 20”W: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 24° 52’ 48”N, 67° 00’ 14”E: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 6° 11’ 47”S, 106° 50’ 48”E: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 64° 08’ 57”N, 21° 56’ 31”W: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 47° 29’ 21”N, 117° 34’ 31”W: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part I – Exploring the EWU Cheney Campus**

Using your mobile phone, open up either Google Maps or Apple Maps and answer the following questions based on the outdoor portion of the lab. You will be given a QR code at the beginning of lab to a Google Sheets where you will enter the data you collect from your phone. (2 pts each)

1. What are the decimal coordinates for location A given to you by your instructor or TA?
2. What are the decimal coordinates for location B given to you by your instructor or TA?
3. What are the decimal coordinates for location C given to you by your instructor or TA?
4. What are the decimal coordinates for location D given to you by your instructor or TA?
5. What are the decimal coordinates for location E given to you by your instructor or TA?

**Part II – Earth’s Rotation**

Please show your work, feel free to use the back of the page if you need it too. (5 pts)

1. What is the approximate rotational speed of Metaline Falls, Washington (to simplify the math, assume the latitude of that location is 50 deg N – it is actually 48.9, but we will round up for this example). Hint: to begin, check out slide 15 in Week 1 lecture to get started here…