INTRO TO ENGINEERING SCALES & MEASUREMENT TOOLS

OVERVIEW

Welcome to week 2: Let the games begin! Now that we've exercised our critical thinking skills, it's now time to start thinking about going outside and doing some field measurements. In order to do this, we need to be able to do several things; First, we need to learn how to communicate by using hand signals and using field terms and phrases which many people think sounds like a foreign language. Second, we need to learn how to measure in tenths of feet using tape measures in the field and the engineer's scale back at our computer workstations. Lastly, we need to learn how to identify, use, and care for those really cool electronic distance measuring (EDM) devices like the electronic Data Collector, Total Station, and varying Robotic devices. Wear appropriate clothing because we're going outside!!

Topics:

- Introduction to Engineering Scales and Measurements
- Introduction to Measuring Tools, Terms, and Hand Signals

Outcomes:

1. Student will demonstrate his/her ability to use an Engineering Scale.
2. Student will demonstrate his/her ability in applied survey math by converting inches to decimal feet and back, also to include, converting meters to decimal feet and back.
3. Student will demonstrate basic proficiency in identifying various measuring devices and peripherals used to measure and locate geographic features in the field.
4. Student will demonstrate basic proficiency in the care and usage of various measuring devices and their basic components for measuring geographic features in the field.
5. Student will demonstrate basic proficiency in using various outdoor hand signals and voice commands to communicate numbers and actions to a second party.

ACTIVITIES (REQUIRED)

In-Class Meeting

1. In-Person Class meeting on Wednesday, 5/27 @4:30p - 7:30p. *(Each class attendance and participation will be worth 5 points.)*

Lessons

2. Work through 2 Lessons below. Each lesson has several parts with a review quiz after each part.

(Each lesson is worth 10 points.)

- Lesson 2.1 Intro to Engineering Scales & Measurements
- Lesson 2.2 Intro to Measuring Tools & Hand Signals

Assignments

Submit Assignment 2 and Lab 2 by 6/3/2015. (10 points each)

3. Assignment 2: Research Measuring Tools & Terms

4. Lab 2: Engineering Scale Worksheet & Blueprints

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