

# ELEVATIONS, CONTOURS, AND SETUP OF THE LEVEL & FIELD NOTES OVERVIEW

## INTRODUCTION

Welcome to week 3: Time to break out the Level and measure Elevations! The Level is the easiest survey instrument to setup and measure vertical heights with. The level of accuracy you can achieve with a Level and the Philadelphia rod can be up to a thousands of a foot; used for those high precision and high dollar construction sites!! We use the level and similar devices to measure differences in elevations. These differences in elevations give us the ability to produce contour lines that show us the "lay of the land." Contour lines allow us to draft hills, valleys, cliffs and other natural or man-made ground features on our maps. For our field lab and assignments, remember to think in tenths of a foot....NO INCHES!!

### Topics:

- Introduction to Elevations and Contours
- Introduction and Setup of the Level and Field Notes

### Outcomes:

1. Student will demonstrate his/her ability to setup and use the Level for elevation measurements.
2. Student will demonstrate his/her ability to setup field notes for recordation of elevation measurements.
3. Student will demonstrate his/her ability in applied survey math by calculating the elevations of geographic features located and measured in the field.
4. Student will demonstrate basic proficiency in identifying characteristics of elevation contours and geographic features in the field and on a map.

## ACTIVITIES (REQUIRED)

### In-Class Meeting

1. In-Person Class meeting on Saturday, 6/6 @8am - 12pm. *(Each class attendance and participation will be worth 5 points.)*

### Lessons

Work through two Lessons below. Each lesson has several parts with a review quiz after each part. *(Each lesson is worth 10 points.)*

2. Lesson 3.1 Intro to Elevations and Contours



3. Lesson 3.2 Intro and Setup of Level and Field Notes

## Assignments

*Submit Assignment 3.1 by 6/10/2015. (10 points)*

4. Assignment 3.1 Hand Draw Contour Lines
5. Assignment 3.2: Leveling & Proper Field Book Setup & Notes-- For Field Lab
6. Lab 3: Setup Level and Field Notes -- Measure Elevations
7. Assignment 3.3: Calculate Elevations of Points from Field Lab

This workforce solution was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright owner.

This project is 100% funded, in the amount of \$12,665,892 by the U.S. Department of Labor and administered by the University of Hawaii.

The Rural Hawaii project is an equal opportunity employer/program and auxiliary aids are available to individuals with disabilities upon request

Hawaii CC does not discriminate on the basis of age, race, sex, color, national origin, or disability or other protected classes in its programs and activities.

For inquiries or complaints concerning our non-discrimination policies, please contact: Disabilities Counselor, Section 504 Coordinator (808-934-2725, Hawaii CC Bldg. 388-Room 106) or Vice Chancellor for Student Affairs, Title IX Coordinator (808-934-2509, Hawaii CC Bldg. 378).



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).