

## 2012 ASCE PACIFIC SOUTH WEST CONFERENCE: Surveying Competition

### OBJECTIVE:

To assess students' knowledge regarding land surveying field techniques, calculations and precision, in a time constrained setting.

### PARTICIPANTS:

- Each school may enter one team only.
- Each team must consist of 4 members with a designated team captain.
- Each team member must be a registered participant of the PSWC2012.

### EVENT DESCRIPTION:

There will be 3 events for the surveying competition:

- Measure and calculate the height of an object with STADIA survey method.
- Measure and calculate the horizontal distance between 2 inaccessible points.
- Set 2 bluetop stakes with specified elevations in designated area.

### GENERAL RULES:

1. Each team will be given 5 minutes to prepare prior to the official start of each event.
2. Each team will need to bring its own equipments, which includes:
  - a. 1 non-reflectorless total station
  - b. 1 tripod
  - c. 1 leveling rod
  - d. 1 pocket tape
  - e. 1 hammer
  - f. 1 NCEES approved calculator
  - g. Pencils
  - h. Reflective Vests
  - i. 2-way radios
3. Prohibited equipments include prism rod, programmable calculators and laptop computers.
4. Judges will have the right to prohibit the use of any equipment that may give a team an unfair advantage.
5. Consultation with faculty, professional surveyors or engineers, or comparisons with other teams will be grounds for disqualification from the competition.
6. All calculations and data entry must be shown in the provided competition package for submission to the judges at the conclusion of the competition.
7. Each event will have a maximum time limit of 30 minutes for field measurements and calculations. Any team that does not submit the provided competition package to the judges within the time limit will be disqualified from such event.

## **SCORING:**

1. Teams will be placed in the order of answers' precision.
2. Recorded event times will only be applicable as a tie-breaker between teams.

## **ADDITIONAL INFORMATION:**

1. STADIA survey in the first event is also known as trigonometric leveling.
2. For stadia survey, stadia constant ( $k$ ) will be set as 100. For a more precise instrument stadia constant, please consult your equipment vendor prior to the competition.
3. Standard round prism will be provided by Cal Poly Pomona civil engineering department on as needed basis. Prism offset will be set to 30 mm, please check your instrument setting to accommodate such offset prior to the competition.