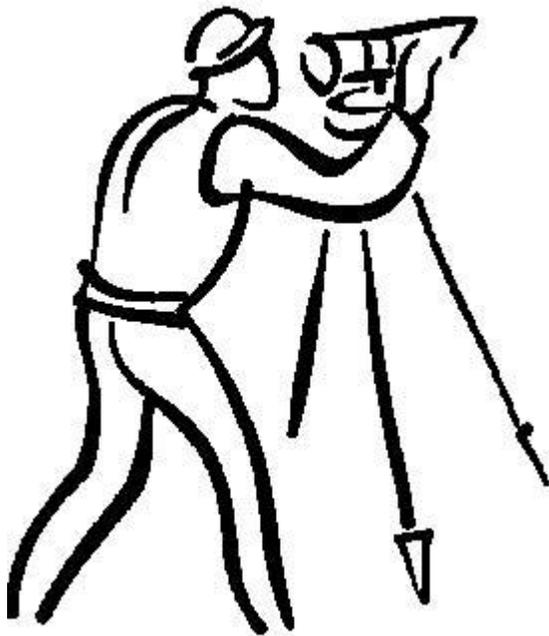


**2012 Great Lakes Conference  
Official Rules- Surveying  
Friday, April 20, 2012  
Eureka Lake**



# 2012 Surveying Competition

## **Purpose:**

Teams will compete in three (3) different events to judge their overall expertise in the field of surveying.

## **Teams:**

The seventeen (17) schools in the Great Lakes Conference are eligible to compete in the surveying competition. Each school may have a maximum of one (1) team.

## **Competitions:**

- 1: Pacing (17 possible points)
- 2: Timed Transit Setup (17 possible points)
- 3: Elevation of a Fixed Point (17 possible points)

## **Scoring:**

Scoring for the surveying competition will be based upon three (3) equally weighted events. The first place team in each event will receive seventeen (17) points. The second place will receive sixteen (16), third place will receive fifteen (15) points and so on.

Each team's score from each of the 3 events will be added together. The team with the highest composite score at the end of all 3 events will win the surveying competition.

There will be a tie breaker for an overall first place tie only. This tie breaker will be a head-to-head matchup on the timed transit setup.

All Judge's decisions are final.

# Competition 1: Pacing

## Competition:

Students will be judged on how accurately they can pace out a given distance.

## Rules:

- 1: Only one (1) student from each team will be allowed to participate in this event.
- 2: The start of the pace will be marked by a spray paint “x” with a flag marked in the grass. The point will be chosen at random by the judges just before the event.
- 3: Students will pace a distance determined by the judges from the marked start location. Each student will mark their pace with a flag supplied by Bradley University.
- 4: An open reel measuring tape will be used to measure the distance of each flag from the starting point. The judge shall record the accuracy to the closest  $\frac{1}{4}$ ".

## Scoring:

The team that is closest to the determined distance will win the event and earn seventeen (17) points. In the event of a tie, the tied teams will restart the competition and pace a distance determined by the judges from the same starting point to break the tie.

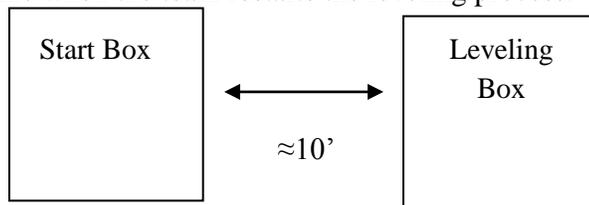
## Competition 2: Timed Transit Setup

### Competition:

Students will be judged on how long it takes to level a transit tri-pod.

### Rules:

- 1: One team, with a maximum of three (3) students, from each school may participate in the Timed Transit Setup Competition.
- 2: All 3 legs of the tri-pod stand shall begin in their fully retracted position.
- 3: All members of the team, as well as the leveling instrument\* and tri-pod, will start in the designated area.  
\*The leveling instrument may be any of the following: a transit level, theodolite, total station, etc. The instrument must have a surface bubble level.
- 4: The tri-pod must be leveled in the “leveling box,” approximately ten (10) feet away.
- 5: The judge will determine if the transit stand is adequately level by use of the surface bubble level on the leveling instrument. The bubble must be entirely within the innermost “bull’s eye”.
- 6: The stopwatch used will be accurate to 1/100 second. In the event of a tie, the tied teams will repeat the competition in order to break the tie.
- 7: If the judge determines that the transit is not level, teams will have one (1) chance to make adjustments. The clock will resume when the team restarts the leveling process.



### Scoring:

The team that has the shortest overall time will win this event and receive seventeen (17) points.

### Timing:

Once the judge and all team members are in position, the judge will announce when the team can start. The judge will start the stopwatch as soon as someone leaves the starting square. Once the transit stand is level, all team members must return to the starting square. The judge will stop the stopwatch when all team members are within the square. If the judge determines that the transit is not level, the team will be given time to make adjustments to the transit stand. To make adjustments, the judge will start and stop the stopwatch using the same rules that were used at the beginning of the event.

## **Competition 3: Elevation of a Fixed Point**

### **Competition:**

Students will be asked to accurately find the elevation of a fixed point.

### **Rules:**

- 1: Teams may have a maximum of five (5) members in this event.
- 2: Teams may use either a transit level or a total station. Teams are responsible for providing all necessary equipment.
- 3: All team members and equipment must start within the designated start box.
- 4: The judge will announce when the team may begin.
- 5: Teams must make exactly one (1) intermediary elevation determination at any point. Based off the intermediate elevation, the elevation of the unknown point may be found.
- 6: Teams will have a total of twenty (20) minutes to submit a final elevation to the judge. If no elevation is submitted after twenty (20) minutes, that team will receive zero (0) points for this competition.
- 7: The assumed elevation for the starting point will be provided.
- 8: Teams must submit a table showing the front sights, back sights, and elevations used to determine the final elevation. Note: a full field notebook is not required.
- 9: Teams are responsible for bringing their own writing materials and calculators.

**Scoring:** The team that is the most accurate will win this event and receive seventeen (17) points.