

# **SITE SURVEYING & SET OUT 2**

**SIN 27755**

## **Submission requirements for all field exercises**

### **Field Reports:**

A report need to be submitted for each field exercise that you carry out. Please make sure all items on the coversheet are enclosed. Lack of information will result in the submission not being accepted. Each student must individually submit a report.

We have only one theodolite and all field exercises are done in groups of maximum seven students. The group as a whole is responsible for ensuring that work is fairly distributed among group members.

Write the reports as soon as possible after the field exercise. Don't forget to include an Assignment Attachment Form. Individual group members will be orally assessed to verify that the competencies have been achieved.

A word processor should be use to write the reports. The font is to be *12 point Times Roman* or *Aerial*. Pages should be stapled at the upper left-hand corner. Margins should be one inch on top, bottom and right hand side and 1.5 inch on left hand side.

Let an independent person read your report before you submit it. If this person has a clear understanding of the field procedures that you carried out your report is ready for submission.

### **Your report must be handed in on the due date**

**Coversheet** containing Subject name, the project (task) name, Student name and ID Number, date of exercise or assessment, the due date and list the students of the group who play a part in the exercise or assessment.

### **Contents of Reports**

You will be given 3 different exercises and assessments

1. Setting out a building with the aid of an optical square (offset method)
2. Setting out a building with a theodolite (horizontal angles) polar coordinates
3. Measure height of buildings with a theodolite (vertical angles)

You are required to:

- calculate all dimensions and angles given in exercises & assessments; use scaled sketch for reference
- carry out the field exercise, record all measurements; prepare a scaled sketch and reference the calculation of angles
- compare the given dimensions and angles with all dimensions and angles from the field exercise.

### **Field notes**

Records

- List all the equipment that is needed for the project you'll do.
- List step by step how you carry out the field work (Exercise or Assessment)

## Sketches / Diagrams

- A scaled sketch of the building outline from existing information (data)
- A scaled sketch with all necessary measurement of field data must also be included

## Calculations

- Check all dimension for accuracy, are the field measurements the same as the calculated measurements? If not describe why not in your discussion..
- Use trigonometric function to calculate the angles from field data.
- Calculate areas and all side length of the set-out building(s).
- Use tabular form where possible and where applicable draw neat sketches or diagrams.

## Drawings

Scaled drawings of the building(s) outline must be included (one from given data & one from field data). Additional sketches may be required for clarification of you calculations.

## Discussion

Evaluate existing given procedures and field survey data and discuss your results - are there any dissimilarity? A significant part of the exercise is **Team Work** - was the work equally distributed among group members. (Who worked the instrument who did the recording. placing the pegs, measuring distance (length between pegs etc.)

## Conclusion /

A conclusion should be as clear & concise as possible. Give particulars of the success or failure of the field exercise. Bring up anything that has not been covered in your discussion.

### **Safety**

For all exercises students must wear a safety vest and appropriate footwear (tongs or sandals are not accepted). Use extreme care when you do the fieldwork. If you observe or feel that unsafe working conditions exist, inform the lecturer immediately.