

Three Rivers Community College

Survey I Lab – CIV K 151
Syllabus

Fall 2011

Instructor; Donald W. Gerwick, P.E., L.S.
Office C 144

Class Location – B 107;

Times: Monday (Lab) 5:00 pm – 7:45; Wednesday (Lecture) 5:00 pm – 7:45

Text; **Elementary Surveying, An Introduction to Geomatics**, 12th edition
Charles Ghilani & Paul R. Wolf

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Office Hours: M 3:00 – 4:30, T 3:00 – 4:30, W 3:30 – 4:30

Additional Times and Day by Appointment.

This course introduces the student to the proper use and care of surveying equipment used in making linear and angular measurements, including tapes, transits, theodolites, levels and total stations. This leads to the development of the basic principles of traversing as it relates to boundary surveying. Course outcomes will include the ability for students to use levels for differential leveling, and using a Total Station for measuring distances and angles of a traverse, as well as trigonometric leveling. Students will be able to complete mathematical calculations for traverse closures and adjustment as well as mathematical calculations for leveling.

As both the lecture and lab sections of the course have evening schedules, **lab and lecture time will be intermixed** to maximize the daylight portions of the scheduled classes. Students are responsible for all assigned sections of text. Quizzes will be based on lecture material and text material.

Required for Course, text listed above and a basic calculator with trigonometric functions. Survey Field Book for Labs

The schedule of labs is as follows with estimated amount of time allotted to each lab in weeks is noted in parentheses.

Lab 1 Horizontal Measurements (1 week)

Students will pace, tape and chain a variety of distances

Lab 2 Instrument Set Ups (1 week)

Students will learn to set up instrument tripods

Lab 3 Differential Level Loop (2 weeks)

Students will run and a differential level loop

Lab 4 Total Station Introduction (2 weeks)

Students will be introduced to Total Station instruments and practice taking distance and turning angles.

Lab 5 Trigonometric Leveling (1 week)

Students will measure a variety of elevation points using trigonometric leveling methods.

Lab 6 Field Traverse (approximately 6 sessions over 3 weeks)

Students will occupy a closed traverse and measure all distances and angles of the traverse.

Lab 7 Field Traverse Computations – Inside Labs (3 weeks)

Students will mathematically close and balance the traverse that they measured in the field.

Lab 8 Traverse Lab Report; class will devote no more than one lab to coordinating and organizing data for their final lab report.

Final Traverse Report Due Monday Dec. 12th

Final Grade – The students final Lab grade will be based on the weighted criteria;

Lab Attendance – 25%

As Labs are for the development of various surveying skills students attendance is necessary. Attendance for labs will be taken during the first 15 minutes of lab sessions.

Lab Field Books – 25%

Maintaining a neat, well documented field book is a fundamental requirement in surveying. The use of data collectors has simplified the process but has not eliminated the legal need for accurate documentation of field surveys.

Lab Reports – 25%

Final Traverse Report – 25%

Lab Attendance is expected, and a portion of the assigned lab grade will be based on attendance. A record of attendance will be kept by the instructor.

Lab Policies - Cell phones brought to lab shall be off and out of site (no texting). Language and behavior that is disrespectful, or disruptive, to others is unacceptable; Students should refer to their Student Handbook for examples of such behavior as well additional school policies.

Academic Integrity – Unless indicated by specific assignments, by the instructor, for group projects, all work for assignments shall be that of the individual student. Cheating on quizzes or using the work of others without proper credit (plagiarism) for assignments, or other forms of academic dishonesty, as defined by the Student Handbook, is unacceptable. If, after evaluation of the potential infraction(s), consistent with the Student Handbook, a grade of “0” for the assignment may be assigned.

Disabilities – If you have a visible or hidden disability that may require classroom or test taking modifications you are encouraged to contact Student Services for assessment.