

Three Rivers Community College

Survey II – CIV K 250 & Lab CIV K 251

Syllabus

Fundamentals of Surveying

Spring 2012

Instructor; Donald W. Gerwick, P.E., L.S., CFM

Office B 104

Class Location – B 107;

Times: Tuesday (Lecture) 5:15 pm – 8:00; Saturday (Lab) 8:00 a.m. -10:45

Text; **Elementary Surveying, An Introduction to Geomatics**, 13th edition

Charles Ghilani & Paul R. Wolf (Note: for spring 2012 semester students may use the 12th edition if they already have a copy)

Off campus weekday Phone 860-442-2201

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Office Hours: T 4:15 – 5:15

Additional Days and Times by Appointment are Available

This course is a continuation of Surveying I and covers boundary location, horizontal and vertical curves and curved boundary lines, areas, topographic surveys and mapping, connecting traverses, horizontal and vertical alignment of roadways, cross sectioning, profile leveling, and construction staking.

Labs will designed to reflect work being done in lectures.

Learning Outcomes – Students will learn the fundamentals of creating a variety of types of maps and learn all phases of boundary surveys. Students will also learn the process of creating and mathematically solving horizontal and vertical curves as related to survey work. Students will obtain field data to create contour mapping, and perform a number of construction stake out exercises within their lab.

Assigned homework (HW) is included below. Assigned numbers shall be for the 13th and 12th editions. For problems where the assigned problem is different for the 12th edition a replacement number will be indicated in parentheses immediately after the problem to be replaced.

Chap. 17 – Mapping Surveys – All sections

Homework (HW); Assignment # 1: 17.1, 17.3 (17.5 12th), 17.7, 17.9, 17.12,
 Assignment # 2: 17.7, 17.21(attached for 12th), 17.23, 17.28
 (17.33 12th)

Chap. 18 – Mapping – All sections

HW: 18.1, 18.11, 18.18, 18.22, 18.25, 18.32

Chap. 21 – Boundary Surveys – All Sections – One of the lab sessions will be a deed research project at a local Town Clerks Office

HW: 21.1, 21.2, 21.12, 21.18, 21.24, 21.7, 21.7

Quiz 1

Chap. 24 – Horizontal Curves – Sections 24.1 through 24.14;

HW; 24.2, 24.3, 24.4, 24.7, 24.15, 24.22

Chap. 25 – Vertical Curves – All sections

HW; 25.2, 25.3, 25.5, 25.8, 25.15, 25.19, 25.24, 25.31

Chap. 26 – Volumes – All Sections

HW; 26.2, 26.4, 26.9, 26.10, 26.19, 26.26

Quiz 2

Chap. 14 – The Global Positioning System – Static Surveys – Sections 14.1, 14.2, 14.3 to 14.3.3, 14.5 through 14.7

HW; 14.1, 14.5, 14.7, 14.10, 14.22, 14.33

Chap. 15 – The Global Positioning System – Kinematic GPS – Sections 15.1 through 15.5, 15.8, 15.10, 15.11, 15. 12

HW; 15.2, 15.3, 15.10, 15.13, 15.27

Chap. 28 – Introduction to GIS – All Sections

HW; 28.1, 28.3, 28.9, 28.18, 28.21

Quiz 3

Chap. 19 – Control Surveys and Geodetic Reductions – Sections 19.1 through 19.3 and 19.6 through 19.6.5

HW 19.1, 19.6,

Chap. 20 – State Plane Coordinates – Sections 20.1 through 20.5

HW; 20.1, 20.2, 20.3

Chap. 22 – Surveys of Public Lands – Sections 22.1 – 22.4

HW; 22.1 through 22.5

Quiz 4

Chap. 27 – Photogrammetry – Sections 27.1 through 27.9

HW; 27.1, 27.5, 27.8, 27.9, 27.10, 27.11

LIDAR – To Be Based on Lecture. Materials

Quiz 5

Final Grade – CIV K250 - The students final grade will be based on the weighted average of 5 quizzes and 2 papers assigned during the semester which will account for 85% of your grade. Assigned homework and class participation will make up the remaining 10 and 5% respectively. No work, makes ups or assignments shall be accepted after the last day of class.

Home Work (HW)/Assignments – Home work assigned will be due on the following lecture period, unless otherwise modified in class; Homework will be turned in at the beginning of class. Students must **SHOW ALL WORK FOR MATH RELATED PROBLEMS**.

Any problems or other assignments other than math portions will be prepared by word processing; no hand written materials other than math calculations (or worksheets) and field books will be accepted. HW will be graded and returned by the following lecture period from the due date. Home work will receive a grade of 0, 1, 2, 3, or 4

The instructor reserves the right to deduct up 50% off for homework or other assignments turned in late.

Quizzes – Students will be allowed one side of one 8 1/2 x 11 sheet of paper for formulas and conversion factors only (no definitions or other written notes)

Students must have their **calculators, cell phones will not be allowed** as a substitute; failure to bring a calculator will result in lost points as many questions will be impossible to answer without one. Quizzes will be based on lecture material and all assigned sections of the text, and homework.

Quizzes will be assigned a value by the instructor; quiz grades will be the number of points earned on the quiz divided by the total value of the quiz. Points earned for each problem will be awarded in a similar manner. **See Class Attendance regarding missed quizzes.**

Class Attendance is expected, although, while students will not be penalized for non-attendance (with the exception as noted above for labs) they will be responsible for material covered in their absence. It will be the student's responsibility to determine what assignments, quizzes or material that may have been missed, and to make arrangements to turn in missed work. If students miss a quiz they must be prepared to take the quiz the day they return to class unless other arrangements have been made in advance with the instructor. Should for **any reason** the quiz is not made up upon return to class it is the students responsibility to make arrangements to take a make up quiz.

Class Room Policies - Cell phones brought to class 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 see me and to contact Student Services for assessment.