

# Three Rivers Community College

Survey II – CIV K 250 & Environmental Surveying - ENV K 280

## Syllabus Spring 2015

Instructor; Donald W. Gerwick, P.E., L.S., CFM  
Office D 205 W

Class Location – B 107;  
Times: Tuesday (Lecture) 5:00 pm – 7:45 pm

Text; **Elementary Surveying, An Introduction to Geomatics**, 14<sup>th</sup> edition  
Charles Ghilani & Paul R. Wolf  
Additional Requirements: A 12” Engineers scale, Calculator

Campus Phone 860-235-2337: Off campus weekday Phone 860-442-2201  
Email [dgerwick@trcc.comnet.edu](mailto:dgerwick@trcc.comnet.edu) or [don@gerwickmereen.com](mailto:don@gerwickmereen.com)

Office Hours: Tuesday 1:15 – 2:15  
Thursday 1:15-2:15 & 3:55-4:55

While this course is a continuation of Surveying I, the majority of the concepts are relatively independent from Survey I CIV K 150. Students taking the ENV K 280 Surveying course be able to merge into this course with relative ease, as any concepts needed from prior material is reviewed within the context of this course. The course covers; mapping, boundary location, horizontal and vertical curve, areas, cross sectioning, profile leveling, and construction staking.

**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.

Homework problems will consist of those noted below each chapter heading. Problems may be augmented or modified in class.

Chap. 17 – Mapping Surveys – Sections 17.1 – 17.9, 17.12, 17.13, 17.15 & 17.16

Homework (HW) 17.1, 17.3, 17.5, 17.7, 17.9, 17.12, 17.14, 17.20, 17.22

Chap. 18 – Mapping – All sections

HW – 18.3, 18.4, 18.11, 18.13, 18.16, 18.20, 18.25, 18.29

**Quiz 1** Tentative Date – Feb. 17

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

HW – 19.1, 19.3, 19.4, 19.6

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

H.W. – 20.1, 20.2, 20.3, 20.11

Chap. 21 – Boundary Surveys – All Sections –

HW – 21.1, 21.2, 21.4, 21.9 & 10, 21.13, 21.16, 21.18, 21.24, 21.27

Chap. 22 – Surveys of Public Lands – Sections 22.1 – 22.4 & 22.22 – 22.24

HW – 21.1, 22.3, 22.5

**Quiz 2** - Tentative Date Mar. 10<sup>th</sup>

Paper – Topic To Be Assigned

Chap. 24 – Horizontal Curves – Sections 24.1 through 24.11; 24.17 & 18; 24.21, 24.22

H.W – 24.2 a,b,c; 24.3, 24.6, 24.7, 24.14, 24.15, 24.20, 24.23

Chap. 25 – Vertical Curves – All sections

HW – 25.2, 25.3, 25.5, 25.14, 25.17, 25.21, 25.26, 25.31

Chap. 26 – Volumes – All Sections

HW – 26.2, 26.4, 26.8, 26.9, 26.19, 26.27

**Quiz 3** – Tentative Date April 14<sup>th</sup>

Chap. 13 - Global Navigation Systems – Sections 13.1 – 13.4.1, 13.6, 13.10

HW – 13.2, 13.5, 13.6, 13.10, 13.13, 13.17

Chap. 14 – GPS -The Global Positioning System – Static Surveys –  
Sections – 14.1 – 14.3.3, 14.7

HW – 14.1, 14.10, 14.13, 14.19

Chap. 15 –GPS– Kinematic Surveys – Sections 15.1 – 15.5, 15.8 – 15.12

HW - 15.1, 15.5, 15.13, 15.17, 15.32

**Quiz 4** – Tentative Date April 28<sup>th</sup>

Chap. 27 – Photogrammetry – Sections 27.1 through 27.9  
H.W. - 27.1, 27.5, 27.9, 27.11

Chap. 28 - Intro to GIS – Sections 28.1 – 28.3

LIDAR – To Be Based on Lecture Materials

**Quiz 5** – Tentative Date May 12<sup>th</sup> or 19<sup>th</sup> (based on weather related TRCC closings)

**Final Grade** – The students final grade will be based on the weighted average of 5 quizzes and 1 paper assigned during the semester which will account for 90% of your grade. Assigned homework and class participation will make up the remaining 5% and 5% respectively. The Instructor reserves the right to drop one quiz. No work, makes ups or assignments shall be accepted after the last day of class without permission of the instructor.

**Home Work (HW)/Assignments** – Home work assigned on a Tuesday will be due on the following Tuesday, unless otherwise modified in 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) will be accepted. HW will be graded and returned by the following Tuesday. Home work will receive a grade of 0, 1, 2, 3, or 4

Late home work, unless otherwise excused will be marked at 25% off.

**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 use 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.**

**MISSED QUIZES:** If students miss a quiz it will be turned onto the testing center and they must make arrangements to take the quiz there. The deadline for taking the quiz will be 4:00 p.m. of the following Tuesday. Missed quizzes not made up by the deadline will count as a “zero” towards the student’s grade. It is the student’s sole responsibility to make arrangements with the Testing Center to take the make-up quiz.

**Class Attendance** is expected, and students 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. Note that 5% of your grade is participation; if a student has more than 3 absences it will affect the participation part of their grade.

**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), the instructor believes there was an infraction (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.

### **Digication**

All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios.

### **myCommNetAlert – Sign up.**

myCommNet Alert is a system that sends text messages and emails to anyone signed up in the event of a campus emergency. Additionally, TRCC sends messages when the college is delayed or closed due to weather.

All students are encouraged to sign up for myCommNet Alert. A tutorial is available on the Educational Technology and Distance Learning Students page of the web site.