

SUR 211 – Plane Spatial Measurement I Spring 2019

A. COURSE INFORMATION

Course number/section: SUR 211.001
Class meeting time: Lecture: M/W (9am to 9:50am); Lab: F (12pm to 4pm)
Class location: Lecture: Online Only
Course Website: niset.populiweb.com

B. INSTRUCTOR INFORMATION

Instructor: C.A. “Tony” Nettleman, III
Office location: Online Only
Office hours: TBA
Telephone: 888.211.2198
E-mail: tn@landsurveycareer.com
Appointments: TBA or by appointment

C. TEACHING ASSISTANT INFORMATION

Instructor: TBA
Office location: TBA
Office hours: TBA
Telephone: TBA
E-mail: TBA
Appointments: TBA or by appointment

Please be aware that e-mails are typically returned within 24 hours and I will be traveling throughout the semester (dates will be posted shortly before each trip). For immediate assistance, please call my cell phone.

D. COURSE DESCRIPTION:

Catalog Course Description

A comprehensive course on instrument use and calibration, data collection, data analysis, and data adjustment methods most commonly used in land surveying. Topics include differential leveling, total stations and electronic distance meters, survey tapes/chains and other conventional survey equipment. Data reduction and adjustment of leveling, traverse, and other survey data will also be addressed.

E. PREREQUISITES AND COREQUISITES

Prerequisites
None

F. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)

Paul R. Wolf and Charles D. Ghilani, "Elementary Surveying: An Introduction to Geomatics", Prentice Hall, Twelfth Edition, USA.

Supplies

- Survey Field Book

G. STUDENT LEARNING OUTCOMES AND ASSESSMENT

By the end of this course, students should be able to:

1. *Recall* the methods that surveyors have used to collect data and *describe* the advantages and disadvantages of each method
2. *List and describe* three measures of central tendency and three measures of variability when *analyzing* geospatial data.
3. *Use* electronic total stations to *collect* geospatial data (horizontal & vertical angles and distances) then *reduce and evaluate* the data to *create* open and closed traverse surveys.
4. *Observe and compute* elevations from differential leveling observations.
5. *Appreciate* GIS including having a basic understanding of GIS systems, GIS data collection, and the meta data associated with GIS files.
6. *Name and describe* the characteristics of boundary surveys, ALTA surveys, and topographic surveys.

H. INSTRUCTIONAL METHODS AND ACTIVITIES

All lectures will be presented live in the classroom. Students will attend live lectures and labs.

Lectures will be held twice a week. Labs will be conducted on Fridays. The lab is due on Wednesday of the next week. Skill checks, quizzes and three exams will be given.

I. MAJOR COURSE REQUIREMENTS AND GRADING

Student learning outcomes will be assessed through examinations, labs, homework, and quizzes.

ACTIVITY	% of FINAL GRADE
(3) Exams @ 150 pts	45
(10) Labs @ 20 pts	20
(10) Homework @ 20 pts	20
(4) Quizzes @ 37.5 pts	15

J. COURSE CONTENT/SCHEDULE

WEEK	TOPIC	CHAPTER(S)	HOMEWORK	LABS	QUIZZES	
1	Introduction to Plane Surveying	1	1.1, 1.2, 1.4, 1.6, 1.8, 1.9, 1.13, 1.15, 1.16, 1.19	Intro Lab		
2	Measurement Theory	3	3.1, 3.2, 3.4, 3.6, 3.9, 3.15, 3.17, 3.18, 3.20, 3.23	Measurement Theory		
3	Chaining	6	6.1, 6.2, 6.3, 6.4, 6.5, 6.7, 6.8, 6.12, 6.15, 6.17	Chaining	I	
4	Intro to Leveling	4	4.1, 4.2, 4.3, 4.6, 4.9, 4.12, 4.28, 4.30, 4.32, 4.33	Level Checks		
5	Differential Leveling	5	5.1, 5.3, 5.4, 5.6, 5.7, 5.10, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17	Level Loop	II	
6	Exam I					
7	Intro to Angles	7	7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.11	Closing the Horizon		
8	Total Stations and Theodolites	8	8.2, 8.3, 8.4, 8.7, 8.8, 8.10, 8.12, 8.17, 8.21, 8.23, 8.31, 8.35	TS: Dist + Angles		
9	Traverses	9	9.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 9.10	Traverse Loop		
10	Traverse Computations	10	10.1, 10.2, 10.3, 10.5, 10.6, 10.7, 10.9, 10.11, 10.14, 10.18, 10.20, 10.21	Traverse Comps	III	
11	Exam II					
12	Boundary/ALTA	21	21.1, 21.2, 21.4, 21.9, 21.12, 21.15, 21.17	Boundary Retracement		
13	GIS	28	N/A	N/A		
14	Mapping	18	18.2, 18.3, 18.5, 18.6, 18.8, 18.11, 18.15, 18.18	Types of Maps	IV	
15	Final Exam Prep					
Final	Exam III					

G. COURSE POLICIES

Attendance/Tardiness

Attendance at all times is compulsory

Late Work

Late work will not be graded.

Participation

Participation in all activities is compulsory.

K. COLLEGE AND UNIVERSITY POLICIES

Academic Integrity (University)

It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior. See the full University Policy at landsurveycareer.com/catalog

Deadline for Dropping a Course with a Grade of W (University)

The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must be submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (landsurveycareer.com/calendar) for the last day to drop a course

Grade Appeals (College of Science and Engineering)

A student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor.

Disability Services

Our services are designed to meet the unique educational needs of enrolled students with documented permanent or temporary disabilities. DS provides intake and consultation services to students seeking to register with our office. DS reviews an individual's documentation of disability and assesses eligibility for services and the determination of reasonable accommodations. For more information visit the Disability Services Office landsurveycareer.com/disability

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.