ERE 553 – INTRODUCTION TO SPATIAL INFORMATION
COURSE SYLLABUS

INSTRUCTOR

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REQUIRED TEXT

Required:

Elementary Surveying by Ghilani and Wolf (13th edition): available at Follet (also on reserve in Moon Library)

A scientific calculator

COURSE PURPOSE

Many courses at ESF require a fundamental background in spatial information. This course introduces basic spatial terminology and methods for determining and expressing position. The course also considers accuracy and precision in the context of horizontal measurements and explores issues with subsequent use of these measurements for producing maps and performing analysis.

COURSE OBJECTIVES

At the conclusion of this course, the student will be able to:

- Evaluate sources of systematic and random errors for horizontal measurements
- Compare the potential accuracy and precision of measurement techniques
- Determine the suitability for calculating derived quantities from measurements
- Describe the fundamental requirements in preparing topographic maps

COURSE STRUCTURE

The lectures for this course are taught concurrently with those for ERE 371 Surveying for Engineers during approximately the first third of the semester. While the lecture content will be the same for the two courses, there are distinct differences. In particular, this course does not include any laboratory exercises, so the single exam and the in-class and homework exercises contribute more substantially to the grade. The assessment components are presented on the next page of this syllabus.

LECTURE SCHEDULE

30Aug	Introduction to Surveying	Ch 1; Ch 2: sec 6-11; Ch 3: sec 1-7
1 Sep	Horizontal Distance Measurement	Ch 6: sec 1-16
6 Sep	Horizontal Distance and Angle Measurement	Ch 6: sec 17-24; Ch 7: sec 1-9
8 Sep	Horizontal Measurement	Ch 7: sec 10-16; Ch 8: sec 1-5, 20, 22
13 Sep	Surveying as a Measurement Science	Ch 2: sec 1-5; Ch 3: sec 1-14
15 Sep	Surveying as a Measurement Science	Ch 3: sec 15-21
20 Sep	Position Determination	Ch 19: sec 1, 2, 6-10
22 Sep	Coordinate Systems	Ch 20: sec 1-5, 12
27 Sep	Mapping	Ch 17: 1-6, 9; Ch 18: 1-12, 16-17
29 Sep	Mapping/Independent review time	
6 Oct	**** EXAM ****	

GRADING

Assessment in this class will be based on three components: one exam, several in-class exercises, and several homework problem sets.

Exam	50 %
In-class exercises	20 %
Homework problems	30 %
	100 %

The numerical scores you earn will average to a final numerical score for the course. Letter grades will be assigned based on the scale shown below. The grade cutoffs may be adjusted by a point when actually assigning final grades.

Letter Grade	Range of Numerical Grade
A	93 and above
A-	90 to just less than 93
B+	87 to just less than 90
B	84 to just less than 87
B-	80 to just less than 84
C+	77 to just less than 80
C	74 to just less than 77
C-	70 to just less than 74
F	Less than 70

RESPONSIBILITIES AND ATTITUDES

In order to be successful, everybody involved in this course must assume certain responsibilities. The professor's responsibilities include managing the overall course conduct, preparing and presenting instructional activities, writing and grading exams, and supervising the teaching assistant(s). The TA's are responsible for helping grade exams, helping to prepare materials, and providing help during class times and office hours. The student's responsibilities are to learn the material and apply it to their profession and career. This responsibility includes attending class, completing assigned work, preparing for exams, and doing whatever is necessary for truly understanding and retaining the subject. Academic dishonesty is unacceptable evidence of character and will be dealt with severely.

COMPUTER USE

Word processing and spreadsheet software packages are considered basic tools in modern life. These types of programs should be used for written and graphic communication and many types of quantitative analyses. E-mail will be used frequently for communicating outside class times. All full-time students have access to an e-mail account through the Syracuse University system. Computer clusters at ESF and at SU provide access to the Internet for those who do not have home access.

SOURCES OF SUPPORT AND CLASS ABSENCE

If you experience academic or personal difficulties that affect your studies or life, there are many sources of support on campus. There is a website that serves to answer many student questions: http://www.esf.edu/students/success. In addition, the ESF Office of Student Life, 110 Bray Hall (470-6660) will provide academic support, career guidance, personal counseling, or direct you to the proper source of help. If you encounter a situation beyond your control in which you will be missing three or more days of classes, you can contact the Office of Student Life and they will contact all your instructors for you. Supportive documentation may be required.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

If you have an identified disability and will need accommodations, you should contact the Office of Student Life in 110 Bray Hall. Councilors will discuss the ESF process and work with you to access supportive services. If you have a learning disability, the College requires you to provide supportive documentation and will develop an approved accommodation sheet for you. Accommodations cannot be provided until the accommodation sheet is established and we meet to discuss its applicability to this course. Accommodations cannot be established retroactively.