# **Introduction to Applied Statistics STA2122**

Section: 22 Term: Fall Semester 2013 Department: Statistics Credit: 3 Hours Meeting: Mon & Wed 3:35 to 4:50PM in OSB 110 Instructor: Thomas F. P. Wiesen Office: OSB 201G (please enter through the Wilcoxon library) Office Hours: Wed & Fri 1:00 to 2:00PM or by appointment Email: Twiesen@stat.fsu.edu



## **Class Details**

### **Textbook and Materials:**

The Basic Practice of Statistics 6th edition by Moore

This Textbook is required for class as homework will often be problems from the book. I also reserve the right to assign reading from the book as homework. The first homework assignment will be assigned two weeks into the class so you have until then to purchase/rent the textbook. Please bring paper (or some type of notebook), a writing instrument, and a scientific calculator to every class. <u>Students will need a scientific calculator</u> on the exams and quizzes. There is no need for a graphing calculator or anything programmable. You will <u>NOT</u> be able to use your cell phone as a calculator on the exams.

### **Course Content**

<u>Basic statistical definitions</u>: population, sample, parameter, statistic, individuals, observations, variable - including definitions of categorical/quantitative variables, distribution. <u>Graphs</u>: bar chart, pie chart, histogram, stem & leaf plot. <u>Summary Statistics</u>: mean, median, quartiles, range, IQR, std., z-score, boxplot. <u>Normal Distributions</u>: minimal mention of probability or random variables, we only talk about percentage of data. <u>Correlation & Simple Linear Regression</u>. <u>Simple Random Sampling & Central Limit Theorem</u>: we discuss percentage of data or probability. <u>One-sample inference</u>: one-sample z-interval, one-sample t-interval, one-sample t-test, interpreting the P-value (left, right and two-sided P-value approach hypothesis tests). <u>One-way ANOVA</u>. <u>Regression Inference</u>. <u>Chi-square Tests</u>: goodness-of-fit and test of independence.

### **Course Details according to Blackboard**

Subsequent credit for STA 5126 is not permitted. No credit is given for STA 2122 if a "C-" or better is earned in STA 2171, STA 3032, or QMB 3200. Only two credit hours are given for STA 2122 if a "C-" or better was previously earned in STA 2023 or STA 3014. The course covers data collection, sample variation, basic probability, confidence intervals, hypothesis testing, analysis of variance, contingency tables, correlation, and regression. MAC1105 (College Algebra) is a prerequisite for this class.

#### Grades

The class will be out of a total of 1000 points and will be divided up by homework assignments (20%), one midterm (20%), cumulative quizzes (25%), and one <u>cumulative final</u> examination (35%). See the class calendar for more details on how the points will be divided up amongst the homework, midterm exam, quizzes, and final examination.

Everything except the homework will be cumulative. This way, by the end of the semester you will not be "rusty" with the material taught in the beginning of the semester; instead you will be experts because you have seen it so many times.

Grade Distributions by Points Earned. These are minimum scores and <u>if need be</u>, I will introduce a "curve." However, you should <u>in no way depend on the curve</u> for your grade because the <u>curve is not guaranteed</u>, and if I do implement it, it may be very small.

А	769-730	С
A-	729-700	C-
B+	699-670	D+
В	669-630	D
B-	629-600	D-
C+	599-0	F
	A- B+ B-	A-729-700B+699-670B669-630B-629-600

## **Class Policies**

#### Attendance

According to FSU policies all students must attend the first day of class. If they miss the first day of class they risk being dropped from the course. After that I will not be taking attendance. However, that being said, missing a lecture is still highly frowned upon. If you do end up missing class be sure to get the missed notes from a classmate.

If you miss a quiz or the midterm, then your absence must be documentable. If it is a "of the moment" type absence, such as illness, please let me know at least by the morning before the class. If you are sick enough to miss a quiz or midterm, then you are sick enough to go to the University Health Services and get a note. If the absence was known in advance, such as jury duty, please let me know at least 3 days in advance. I reserve the right to see the documentation for the absence. With the exception of extreme circumstances, such as being in a coma, final exam make ups will not be given.

#### **Classroom conduct**

You are expected to act professionally in the classroom. This expectation includes but is not limited to: being quiet, silencing your cellular device, respecting other students, respecting the instructor, and asking questions by raising one's hand. If you are acting disorderly to the point where you are impeding on other students' ability to learn, I reserve the right to ask you to leave the classroom.

### Late Work

All homework will be due at the beginning of the class period. If the homework is turned in the next class meeting time after the due date, it will be marked off 25%. If it is turned in a week after the due date, it will be marked off 50%. If it is turned in within 2 weeks, it will be marked off 75%. If the homework is turned in after 2 weeks after the due date, I can grade it to tell you what you were doing right/wrong, however, no points will be granted.

#### Syllabus

This syllabus should be considered a contract between me (the instructor) and you (the student). However, there may come a time when a change to the syllabus becomes necessary. In such an event, the change will be announced in class and posted to blackboard.

Date	Event	Points (i	f any)
Monday, Aug 26	First day of class, mandatory attendance		
Monday, Sep 2	No class, Labor Day		
Wednesday, Sep 11	HW 1 assigned		
Wednesday, Sep 18	HW 1 Due		25
Monday, Sep 23	HW 2 assigned		
Wednesday, Sep 25	Quiz 1		30
Monday, Sep 30	HW 2 Due		35
Wednesday, Oct 2	HW 3 assigned		•
Wednesday, Oct 9	Quiz 2		40
Friday, Oct 11	Last day to withdraw from class		
Monday, Oct 14	HW 3 Due		35
Wednesday, Oct 16	HW 4 assigned		
Wednesday, Oct 23	Quiz 3		50
Monday, Oct 28	HW 4 Due		35
Wednesday, Oct 30	Midterm Examination		200
Wednesday, Nov 6	HW 5 assigned		•
Monday, Nov 11	No class, Veterans' Day		
Wednesday, Nov 13	Quiz 4		60
Monday, Nov 18	HW 5 Due		35
Monday, Nov 25	HW 6 assigned		
Monday, Dec 2	Quiz 5		70
Wednesday, Nov 27	No class, Thanksgiving holiday break		
Friday, Dec 6*	HW 6 Due		35
Wednesday, Dec 11	Cumulative Final Examination (10AM-noon block exam)		350
Tuesday, Dec 17	Final Grades uploaded to Blackboard (4PM)	total	1000
Wednesday, Dec 18	Final Grades visible to students (Noon)		

## Calendar

\*HW6 is due on Friday, December 6<sup>th</sup> at <u>5 PM</u>. We do not have class on Fridays, so just turn in the homework by putting it in my mailbox. My mailbox is located on the second floor of the Oceanography and Statistics Building (OSB).

## **University Policies**

### Academic Honor Code

The Academic Honor Policy of The Florida State University outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." Please see the full statement of the Florida State University Academic Honor Policy at http://fda.fsu.edu/Academics/Academic-Honor-Policy.

<u>Academic Honor Code violations will not be tolerated</u> and may result in receiving a zero for the assignment, failing the class, and disciplinary action from the University.

#### Completing this class as an Incomplete or Audit

If you are auditing this course or taking it to complete an "Incomplete" earned in a previous term, make yourself known to me so that I may let you have access to our current Blackboard websites. If you are completing an "Incomplete", let me know who your former instructor was so that I may inform them of your grade at the end of the term.

#### **Grading Appeals**

Grading appeals will be dealt with on a case to case basis.

#### Americans with Disabilities Act

Students needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for and type of accommodation. This should be done during the first week of class. This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the: Student Disability Resource Center 108 Student Services Building 874 Traditions Way Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD) sdrc@admin.fsu.edu http://www.disabilitycenter.fsu.edu/