Syllabus for STA 2122, Section 23
Spring 2015

Instrcuctor: He Jiang

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      Office Hour: Wednesday 2:00pm–3:00 pm, or by appointment

Course Information

      Course Name: Introduction to Applied Statistics
      Class Times & Locations: Tues./Thurs.: 9:30 am - 10:45 am : HCB 027
      Blackboard Website: https//campus.fsu.edu/
      Credit Hours: 3

Prerequisites: A grade of C- or better in MAC 1105 College Algebra (or equivalent).

Textbook: "The Practise of Basic Statistics", 6th edition; by David S Moore. W.H. Freeman & Company, New York; 2010.

Required Material: A simple scientific calculator, pencils, pens, erasers, and notebook.

Special Note: No credit given for STA 2122 if a grade of C- or better is earned in STA 2171, STA 3032 or QMB 3200.

Course Objectives: By the end of the course, students will demonstrate the ability to:

1. Analyze and address problems drawn from real world scenarios by applying appropriate mathematical, statistical, logical, and/or computational models or principles.

2. Interpret and evaluate data and information as presented in a variety of modes (such as tables, graphs, and charts), using appropriate technology. They will also be able to clearly communicate a summary of their findings to peers.
   The above two competencies will be assessed in the L.S. Quantitative Assessment for STA 2122, which includes a written summary of results.

3. Use descriptive statistics and graphical methods to summarize data accurately.

4. Use inferential statistics to make valid judgments based on the data available.

5. Select the appropriate statistical tools to analyze a particular problem.

6. Describe the goals of various statistical methodologies conceptually.

7. Develop a healthy skepticism toward statistical studies and their results based on a sensible consideration of the techniques employed.

Attendance & Withdrawals/Drop-out: First day attendance is mandatory. I expected that persons will show up for all lectures. Bonus point of 5% will be given o each test for full attendance up to that test data.

Blackboard Website: Please ensure that you check the websites daily for new announcements.

Grading Outline: 3 tests: Test1 - 20%, Test2 - 20%, Final Exams/Test3 - 40%. Homework - 20%.

Final Grade Calculation: 0.2 * Test1 + 0.2 * Test2 + 0.4 * Test3 + 0.2 * Homework average score.

Exams: Three written (non-multiple choice) tests are given during the course of the semester excluding the final. A calculator, eraser, pens/pencils will be needed for these tests. Proper preparation for the exams includes keeping up with the home works, lecture notes and examples along with the practice exercises.

Homework: Sufficient time will be given to complete homework. Homework are expected to be handed in on time. You will lose 10 points per day if you postpone submitting your homework.

Practice Exercises: Practice exercises will be given from a textbook. These exercises will not be graded and are given for your benefit. **Important: some exercises will appear in the exams.**

Final Exam: Tuesday, Apr 28th, 3:00–5:00 pm, room to be announced.

Final Grading Scheme:

Letter grade	Final grade
A	93–100
A-	90-92
B+	87–89
B	83–86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	0-59

Course Policies Regarding make-up work: All tests and home works are compulsory. In the event of circumstances beyond your control of which may include medical illness, deaths in family, legal issues etc. The instructor will make necessary arrangements to facilitate completion of assignments once a suitable, timely, and acceptable written excuse is submitted. Make-up exams can be made by appointment.

Working Together: It is ok to work together on homework. However, when it comes time for you to write up the solutions, I expect you to do this on your own, and it would be best for your own understanding if you put aside your notes from the discussions with your classmates and wrote up the solutions entirely from scratch. Working together on exams, of course, is expressly forbidden.

Help outside Class: You may ask me questions via sending me email or you may visit my office during the office hours. The Statistics help room in Strozier Library is also a good resource center. Your classmates are good peer help to seek and may help you form good human resources. You may also hire a tutor for an hourly fee from the statistics department.

Absences: You are expected to attend every class. If you are not able to turn in a homework assignment, take an exam because of an unexcused absence, you will not be able to turn the homework in late or exam. A University excuse from a scheduled class activity such as an exam must be presented in writing no later than two weeks prior to the date of the

absence. An absence due to illness or family emergency may be excused, provided that you can supply acceptable written evidence if required, and that you notify the instructor *as soon as possible*. Notification is almost always possible immediately upon occurrence of an emergency. If you're too sick to telephone, you can get a friend to do it. Failure to make such timely notification may result in denial of your request.

Classroom Courtesies:

1. Come to class on time and stay for the entire class period. Try to avoid arriving late or leaving early in the class.

2. Bring your own calculator, pencils/pens, erasers, writing paper, handwritten notes and printed notes to every class.

3. Turn off ALL devices you hold when you enter the classroom to prevent interruptions and distractions. Do not use cell phones, laptops or iPods, etc. in class.

4. When a test is scheduled, bring with you a working calculator, sharpened pencils and erasers. Please do not use any other devices such as a cell phone as a substitute for a calculator.

5. On a test you may not communicate with your classmates. Any form of cheating on a test will have serous consequences and cases of academic dishonesty may be referred to the University Judicial Officer.

6. I encourage students to ask questions; no questions is considered "stupid" so if you have difficulty understanding something please bring it to my attention. If the question is not solved in the class, you my come to me after the class or in the office hours.

7. I expect that everyone will maintain a classroom conducive to learning. Private communications are not allowed, especially during tests. Neither are reading extraneous materials, or sleeping.

8. Food are not allowed in the classroom.

Academic Honor Policy and ADA Statement: This is found at the following website: http://facsenate.fsu.edu/ahpandada.html

ACADEMIC HONOR POLICY: The Florida State University Academic Honor Policy outlines the University's expectation 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." (Florida State University Academic Honor Policy, found at http://dof.fsu.edu/honorpolicy.htm.)

RELIGIOUS WORK-RESTRICTED HOLY DAYS For policy, see the bottom of the FSU General Bulletin Undergraduate Edition at
http://registrar.fsu.edu/bulletin/undergrad/info/integrity.htm).

You MUST submit a self-written-and-signed letter at least one week before the holiday stating that they will be absent due to the religious holiday.

AMERICANS WITH DISABILITIES ACT: Students with disabilities 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 accommodation and what type. 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
874 Traditional Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

Course Coverage:
This course will cover but not limited to:
- Terminology/Initial Ideas: population, sample, parameter, statistic, categorical, quantitative
- Sampling: simple random sample
- Graphs: histograms
- Summary Statistics: mean, quartiles, standard deviation, IQR, five-number summary, outliers, boxplot
- Normal Distributions: z-table, forward problems (finding area under the curve/percentage of data), backward problems (finding cutoff points given area)
- Central Limit Theorem: sampling distributions of x-bar, features of the distributions and implications when using a larger/smaller sample to estimate μ - One-sample: z- and t-interval, z- and t-test, explanation of P-value (Type I & II errors are optional)
- nonparametric test: Wilcoxon-Mann-Whitney test
- One-way and Two-way Anova F-test
- Chi-square test of Indenpendence: automatically involves the use and understanding of contingency tables
- Correlation: what the sign and absolute value of r imply, correlation does not imply cause-and-effect
- Simple Linear Regression: read scatterplots, calculate and interpret R-sqd/slope/y-intercept, make predictions, read residual plots - Simple and Multiple Linear Regression Inference