STT 200: Statistical Methods - Lecture 3
Fall Semester, 2014

Time and Place:  M W F 11:30 AM - 12:20 PM  132 HUB
Instructor:  Yimin Xiao
Office:  C-437 Wells Hall
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Website:  http://www.stt.msu.edu/~xiaoyimi

Further information on the course can be found at http://msu.lon-capa.org and http://www.stt.msu.edu/Academics

Office Hours:  M W F 10:00–11:00 AM, or by appointment. In addition, I will remain in the classroom briefly following lectures to discuss questions.


Prerequisite:  Math 103 or designated score on mathematics placement test.

Help Room:  Statistics Help Room A102 Wells Hall is staffed for certain hours of the week with teaching assistants to give walk-in help. See Help Room schedule posted on: http://www.stt.msu.edu/Academics

Teaching Assistant:  Andrew Shutt

- Your TA’s office: C500 Wells Hall
- His office hours: MW 2:00 PM – 3:30 PM.
- If you have any queries about exercises or homework problems, please contact your TA first.

Course Description and Objectives:  STT 200 is an introduction to the concepts and methods of basic statistics and probability for students without a background in calculus. It will cover: Data collection and analysis, probability models, random variables, tests of hypotheses, confidence intervals, simple linear regression.

Students will learn the most practical and commonly encountered statistical concepts and methods, the basic theory behind statistical decision making, as well as how to implement statistical techniques for various applications. Students will appreciate the value of statistics in their personal and professional lives.
By the end of the course, the student will

- understand the purposes of descriptive and inferential statistics.
- understand and be able to calculate different measures of central tendency and variability that are commonly used.
- understand and be able to determine correlation coefficient and the regression line.
- understand basic concepts of probability (e.g., events, rules of probability, commonly used probability models).
- understand the use of the distribution of sample means.
- understand and be able to construct and interpret confidence intervals.
- understand and be able to conduct hypothesis testing.

**Lecture:** STT 200 is a survey course of the most practical and commonly encountered statistical concepts and methods. The course is taught at an elementary mathematical level (college algebra). The textbook will be followed fairly closely. The course is divided into three units:

- Unit 1: Chapters 2-9
- Unit 2: Chapters 10-18
- Unit 3: Chapters 19-24

**This course is demanding and requires a great deal of work. Students are responsible for all material covered in class. Students are expected to attend all meetings of the class and to bring their text and a calculator.**

**Recitation (Tutorial):** In addition there will be a recitation session each Tuesday. You should find out the section you are enrolled in and attend the recitation regularly. The recitation sessions will supplement the lectures and will be used to cover material and exercises from the text and tests. You should attempt the assigned problems and use the recitation session to discuss solution or difficulties.

**Homework:** Each Monday during the semester a list of the present week’s readings and exercises will be announced. Some of these exercises will be designated as “homework problems” and will be collected in the following week at the beginning of your recitation class. It is absolutely essential for you to keep up with the homework assignments. No late homework assignments will be accepted.

**Quizzes:** There will be five 15-minute quizzes given during this semester. The quizzes are designed to practice the material taught in lectures and help you develop problem-solving skills. **There will be no make up quizzes. The lowest quiz score will be dropped.** The quizzes will be given from 12:05–12:20PM on the following Wednesdays:

- September 10
- October 1
- October 15
- November 5
- December 3
Exams: There will be three mid-term exams and a final exam. The final is a 2-hour exam and will be comprehensive. The tentative schedule is as follows:

- Midterm 1 – Wednesday, September 24
- Midterm 2 – Wednesday, October 22
- Midterm 3 – Wednesday, November 19
- Final Exam – Wednesday, December 10, 10:00-12:00 noon.

Exam Policies:

- All exams including a comprehensive final exam are multiple choice and are “closed book” and “closed notes”.
- Bring a picture ID to all examinations.
- Cell phones are to be turned off and stored where they cannot be seen.
- Do not request make up exams unless it is absolutely necessary and you can substantiate your reason for the request. In this case, please notify Prof. Xiao prior to the test date.

Grading: The final grade is determined from homework assignments (100 points), quizzes (100 points), 3 mid-terms (100 points each) and the final exam (200 points). I will provide some extra credit opportunities in class. Details will be given later.

The grades will be given roughly according to the following scheme:

<table>
<thead>
<tr>
<th>Percentage (%)</th>
<th>90–100</th>
<th>85–89</th>
<th>79–84</th>
<th>71–78</th>
<th>63–70</th>
<th>54–62</th>
<th>47–53</th>
<th>46 ↓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>4.0</td>
<td>3.5</td>
<td>3.0</td>
<td>2.5</td>
<td>2.0</td>
<td>1.5</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
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Attendance: You are expected to attend all meetings of the class. Missing classes is the primary reason why a student do poorly in this class. If you must miss a class, plan to get notes for that day from a classmate.

Academic Honesty: All students are expected to adhere to the University’s policy concerning academic integrity. It is covered in the Spartan Life booklet under General Student Regulations. For more information about this, please consult the handbook or visit the Spartan Life website at http://www.vps.msu.edu/SpLife/
Important Dates: In addition to the exam dates, you should be aware of all the University mandated dates related to courses. These are currently available at: http://www.reg.msu.edu/ROInfo/Calendar/WWWDates.asp?Semester=FS14

Here are a few of the more important dates:

- August 27  First day of classes
- September 1  Labor Day – University closed
- September 3  Online Open Add Periods Ends
- September 22  End of 100% refund
- October 15  Middle of semester; Deadline to drop with no grade
- November 27 and 28  Thanksgiving Holiday – University closed
- December 5  Last day of classes

Advice for Students:

- Come to class and recitation prepared.
  - Read the chapter before lecture.
  - Reread the chapter after lecture to see if you have follow up questions.
  - Do the suggested exercises before recitation and come prepared with questions.
- Form a study group.
- Learn how to use your calculator.
- Keep a notebook of vocabulary.
- Keep a list of reference examples.
- Get help if you need it- from me, your TA, and teaching assistants of the Statistics Help Room.
- ADA: To arrange for accommodation a student should contact the Resource Center for People with Disabilities (353-9642) http://www.rcpd.msu.edu/