MA155 Statistical Reasoning
Spring 2012
Mrs. Ann Schnurbusch—Instructor, Mathematics Dept.—Southeast Missouri State University

MA155-03  TR 9:30—10:45 (Johnson 219)

Prerequisites
MA102 with a grade of ‘CR’ or MA095 with a grade of ‘C’ or higher, or ACT Math subscore of 18-20 with MA095 placement score of 14 or higher, or ACT Math subscore of 21 or higher. Any required developmental mathematics courses must be completed before enrolling in this course.

Office, Phone, Email, Website
My office is #211 in Johnson Hall.
Email: an Schnurbusch@semo.edu
Phone number: 651-2771
Class website: http://cstl-csm.semo.edu/anschnurbusch/ma155/ (Use the URL to access the website directly if the portal is down.)
Office hours:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday and Wednesday</td>
<td>1:30 to 3:30</td>
<td>Johnson Hall 211</td>
</tr>
<tr>
<td>Tuesday and Thursday</td>
<td>11:00 to 12:00</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>8:30 to 9:30</td>
<td></td>
</tr>
</tbody>
</table>

I am in my office at times besides the listed office hours. Feel free to drop by at other times or email me if you want to set up a time to meet. There is also a Math Learning Center available to help you. The location is Johnson 104 and the hours are Monday to Thursday from 8:00 to 5:00, Friday from 8:00 to 2:00 and Sunday 6:00 to 9:00.

Course Description
This is a 3 hour course that will introduce statistical ideas to students. The student will reach an understanding of these statistical ideas, be able to deal critically with statistical arguments, and gain an understanding of the impact of statistical ideas on public policy and other areas of academic study.

Course Objectives
- To develop the ability to identify and analyze the various representations and misrepresentations of statistical data.
- To collect data from a variety of sources, and analyze its validity and effect on society.
- To present statistical data, and give reasons for accepting or not accepting the conclusions drawn from it.
- To gain an appreciation for the complexity of statistical analysis, and how statistical ideas and reasoning ideas are used in public policy and the human sciences, from sociology to medicine.

Textbook and materials
- You will need a basic scientific calculator for the class. Although a graphing calculator is okay; it is not necessary for the course.
- You will not be allowed to use the calculator on your cell phone, IPod, MP3 player, etc. during class.
- At times, you will be asked to use Excel or the statistics program PASW (previously called SPSS). Both of these programs are on all open labs on campus. Directions will be provided to do the calculations and graphs.

Course Outline

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
<th>Class Periods (Approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>Producing Data</td>
<td>8</td>
</tr>
<tr>
<td>3, 4, 7, 5</td>
<td>Organizing Data</td>
<td>12</td>
</tr>
<tr>
<td>8, 9</td>
<td>Inference</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Chance</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Tests</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Final Exam</td>
<td></td>
</tr>
</tbody>
</table>
**Expectation of students**

- **Students are expected to be active learners.**
  1. Attend class and actively participate in classroom activities and discussions. You may want to review the official University attendance policy in your University Bulletin.
  2. Collect data as assigned and complete assigned homework.
  3. Read assigned literature, including the text.
  4. Complete individual and group projects.
  5. Study for and perform adequately on tests.

- Students are expected to engage in academic honesty. Southeast’s Bulletin addresses academic honesty. In part, the Bulletin states that “Academic honesty is one of the most important qualities influencing the character and vitality of an educational institution. Academic misconduct or dishonesty is inconsistent with membership in an academic community and cannot be accepted. Violations of academic honesty represent a serious breach of discipline and may be considered grounds for disciplinary action, including dismissal from the University.”

- Exhibit a shared sense of respect in and out of the classroom among the students and instructor.

- Students are not to use cell phones, iPods, laptops or other small electronic devices during class time.

- Services are available to students with physical or learning disabilities. Information about services may be obtained from Learning Assistance and Disability Support Services (http://www.semo.edu/cs/services/lec.htm). Please talk to me if accommodations are needed.

- Announcements, study guides, homework assignments, PowerPoints and grades will be posted on the class website. Grades will be updated every two to three weeks.

- Read your Southeast Email. I will occasionally communicate with you via email and you may communicate with me. Be sure to sign your emails when you use your Southeast email account. If the portal is unavailable, you can still access your email with http://student.semo.edu.

**Basis of Student Evaluation**

- **Homework, class work and student presentation of problems. (15% of total grade)**
  There will be several types of homework in this class.
  - Assignments will be made from exercises in the textbook. Collected homework will be graded on the basis of both completion and accuracy. All work must be shown to receive any credit. Each assignment should have the page and problem numbers in the upper right hand corner.
  - Occasionally, there may also be assignments involving data collection, surveys, reading articles, class exercises, worksheets, etc.
  - There are no excused absences except those excused by the university such as athletes for a competition.
  - Two late assignments will be accepted for full credit. Late assignments must be turned in within one week of the due date. When turning in a late assignment, be sure that your name and the page and problem numbers are in the upper right corner and the assignment is clearly marked late. No late assignments will be accepted after those two.

- **Tests/Projects/Final Exam (85% of total grade)**
  - **Tests** (300 total points)
    - There will be 3 period long examinations each worth 100 points.
    - Exams missed for a valid reason may be made up. If at all possible, a time to take the exam should be scheduled before the exam is missed. A missed exam must be taken before the next class period. It is your responsibility to contact me.
  - **Projects** (75 total points)
    - You will do 2 projects, but will have some choice as to the project type.
    - Everyone will do the Chapter 1 project with 25 points possible.
    - You will do either the Chapter 4 project or the Chapter 7 project with 50 points possible.
    - I’ll pass out a separate sheet with general project descriptions and due dates. More specific project directions and scoring guides will be posted on the website.
  - **Final Exam** (150 points)
    - The university final exam schedule will be followed. The final exam for MA155-02 is 8:00 on Thursday May 10, 2011.
    - The final exam will be a comprehensive final exam.
    - The final exam is a requirement of MA155. If a student does not take the final exam, he/she will receive an X indicating they did not complete the class. An X on your transcript turns into an F.

- Grades will be figured as follows:
  
  90-100  A  
  80-89   B  
  70-79   C  
  60-69   D  
  0-59    F