

Mathematics 220
Elementary Statistics, Fall 2017
Tuesday and Thursday
Instructor: Dr. Steven Garren

I. Prerequisite: demonstration of strong preparation in algebra

II. Instructor's office information

email: garrenst@jmu.edu
location: Roop 313
web-site: <http://educ.jmu.edu/~garrenst>
<http://educ.jmu.edu/%7Egarrenst>
office hours: Monday, 1 p.m.–2 p.m.
Tuesday, 2 p.m.–2:25 p.m.
Wednesday, 1 p.m.–2 p.m.
Thursday, 2 p.m.–3 p.m.

III. Text required

William Navidi and Barry Monk (2014), *Essential Statistics*, **FIRST EDITION**
(not in the bookstore)

IV. Course objectives

- Some of the main topics covered are descriptive statistics, frequency distributions, sampling, estimation, testing of hypotheses, regression, correlation, and an introduction to statistical analysis using the computer language SPSS.

V. Grading

35% WeBWorK online homework and SPSS homework
15% Midterm I Exam: Tuesday, September 26
15% Midterm II Exam: Thursday, October 19
15% Midterm III Exam: Thursday, November 16
20% Final Exam: Tuesday, December 12, 8 a.m.–10 a.m. (8 a.m. section)
Thursday, December 14, 8 a.m.–10 a.m. (9:30 a.m. section)

A. Homework

- Textbook-related homework problems will be highly recommended but not graded, and are listed at my web-site.
- SPSS may be useful in solving some of the WeBWorK online homework problems.
- Students are permitted to work together on the WeBWorK online homework and SPSS homework and to seek help from the Science and Math Learning Center.
- Students are permitted to work together on the SPSS homework, without directly copying other students' work. It is unacceptable for two or more students to turn in the same SPSS homework based on electronic copies, in part or in full. Each student must fully type (and click, via a mouse) his/her own homework. Hence, students may NOT turn in SPSS homework typed (and/or clicked) partially or fully by another individual. Furthermore, do NOT allow any other student to have electronic access to your SPSS homework, in part or in full.
- All homework scores count toward one's final grade; i.e., no scores are dropped.
- No late homeworks will be accepted.

B. Exams

- Exams are closed notes and closed book. Formula sheets for exams are provided **ONLY** by the instructor. Students may **NOT** bring their own formula sheets to exams.
- Each student will be allowed to bring to each exam a calculator, although students may not share calculators.
- The final exam is cumulative.
- Most all of the weighting of the exams will come from modifications to the textbook homework problems and in-class examples.
- During exams, no hats, no hoods, and no earphones may be worn; no cell phones, no iWatches, no Fitbits, etc., may be used.
- If an exam is *curved*, then only students who did not take a bathroom break (or water break, etc.) will receive the *curve*.

VI. Miscellaneous

- Graphing calculators will **NOT** be permitted in our section of Math 220. Please see: <https://education.ti.com/en/products> and you can select among Scientific Calculators (preferred) or Basic and Elementary Calculators, but definitely **NOT** Graphing Calculators.
- The Science and Math Learning Center offers free tutoring in MATH 220 in the Student Success Center, 1st floor. For additional information, go to <http://www.jmu.edu/smrc> or call 568-3379.
- For locations of (PC) computers, see <http://www.jmu.edu/computing/labs/locations/index.shtml>
- Students may enroll in *auto-grade*, which immediately emails the student his/her grade whenever a (homework, exam, or final) grade is recorded electronically.
- Class attendance will be taken each class and will be emailed to the students via *auto-attendance*.
- Cell phones (and other portable electronic devices) must be completely **INVISIBLE** to yourselves and the instructor during class. The penalty for each violation is one point off the final grade. Records will be maintained via *auto-invisibility of cell phone*.
- Any student who exits the classroom (regardless of whether or not the student returns to class) before the end of class will be marked as *absent*. Frequent exits will result in a grade reduction.
- Disruptive or chatty behavior will result in the reduction of the student's final grade.
- The honor code of the university will be strictly enforced.

Addendum

Goals of the Course

1. To develop an understanding of the logical structure and style of mathematics by (a) using reason in an orderly, cogent fashion and (b) writing clear, well organized solutions to problems. Structure refers to the foundations of mathematics and to the techniques used to build on those foundations. Style refers to the clarity, elegance, efficiency, and precision desirable in mathematical expression.
2. To provide knowledge of the theory and application of statistics appropriate to the disciplines for which this is a required course.
3. To provide knowledge of the theory and application of statistics appropriate for an entry level statistics position in business, industry or government, which requires collaboration with a statistician.
 - (a) Collecting data, organizing data and making statistical inferences from data.
 - (b) Using statistical methods of analyzing data.
 - (c) Using probabilistic principles to model problems and develop solutions.
 - (d) Using the principles of survey and experimental design for gathering data.
 - (e) Being proficient in the use of computer software to solve problems and analyze data.
 - (f) Performing statistical interpretations of graphs and numerical summaries of data.
 - (g) Using confidence intervals and tests of significance in interpreting data.
 - (h) Understanding the concept of sampling variability and its relevance in inference.

Nature of the Course Content

3 credits. Offered fall and spring.

Descriptive statistics, frequency distributions, sampling, estimation and testing of hypotheses, regression, correlation and an introduction to statistical analysis using computers.

Prerequisite: MATH 155, MATH 156 or sufficient score on the Mathematics Placement Exam. Not open to majors in mathematics.

Syllabus information from the university is available at
<http://www.jmu.edu/syllabus>