Instructor: Lihua Chen
Office: Roop Hall 338  Office phone: 540-568-6533
Office hours MWF 12:30-1:30, W: 3:30-5:30 and by appointment
Email: CHEN3LX@jmu.edu

Course Website: http://educ.jmu.edu/~chen3lx/math220

Goals of the Course:
1. To understand how to efficiently collect data.
2. To use graphs and numbers to display and explore data.
3. To use graphs and statistical methods to analyze the relationship between two variables.
4. To use statistical methods to make inferences about population parameters.
5. To understand the concept of variation, probability, distribution and sampling variability.

Prerequisite: MATH 155, MATH 156 or sufficient score on the Mathematics Placement Exam.

Evaluations:

Quizzes: 15 percent
Final Exam : 40 percent
(5/4 Wednesday 8:00-10:00 if meeting time 10:10-11:00,
5/4 Wednesday 10:30-12:30 if meeting time 11:15-12:05

Homework: Homework will be given roughly each week but will not be graded. However, many of the in class quiz problems will be similar to the homework problems. Some homework will involve use of SPSS statistical software.

Quizzes:
Unannounced quizzes will be given and quizzes and tests may NOT be made up.
Up to two quizzes with lowest scores may be dropped. Note one purpose of this policy is to take care of missed work due to excused absences. If you miss more than you are allowed to drop due to excused absences, we will deal with that on an individual basis.

Exams: The exams are closed notes and closed book. The formula sheets will be supplied by the instructor.
You can bring a calculator to each exam, but you may not share a calculator with other students.
The final exam is cumulative.
**Attendance:** Attending classes is very important for learning the required material of this course. Students who missing 4 or more classes without excuses will result in a reduction of grade by one letter.

**Others:**
For locations of computers, see http://www.jmu.edu/computing/labs/locations/index.html

The Science and Math Learning Center (SMLC) offers free tutoring in Math 220 at Student Success Center, 1st floor (SSC 1100). In the spring 2016, it is open Sunday 5 pm to 8 pm, M-R 10 am to 8 pm and F 10 am to 2 pm.

The honor code of the university will be strictly enforced. The JMU Honor Code is available from www.jmu.edu/honor/code.shtml.

Disruptive behavior will result in the reduction of the student’s final grade.
No WP or WF grade will be issued for this course.
No Honors option will be offered in this course.
For related academic policies of the university, see www.jmu.edu/syllabus

**Tentative Outline**

Chapter 1: Basic ideas: Sampling, Types of data, Design of experiments, Bias in study
Chapter 2: Graphical summary of data
Chapter 3: Numerical summaries of data
Chapter 4: Probability: Addition rule, Multiplication rule, Conditional probability
Chapter 5: Discrete probability distributions
Chapter 6: The normal distribution: Normal curve, Sampling distribution, Central limit theorem
Chapter 7: Confidence intervals: For a population mean and a proportion
Chapter 8: Hypothesis testing: For a population mean and a proportion
Chapter 9: Inference on two samples: Difference between two means, Difference between two proportions
Chapter 10: Tests with qualitative data: chi-square test
Chapter 11: Correlation and regression

This is a tentative schedule. The actual contents may be altered based on the time limitation and the needs of the students.