Lesson Structure
Math 200 Online

Written homework assignments can be found on MyOpenMath in the chapter folders. See the Homework Grading Policy document for format. It is due on the Friday before exam days and will be graded on completeness, correctness, neatness and following the grading policy. All work must be shown. In order to be successful in this class it is best to do homework daily. <u>Do not wait until the last minute to do your homework; it does not work</u>. Follow the structure found on the Sample Written Homework document. Plan on spending between twenty and twenty-five hours per week on this course.

Online homework is found in MyOpenMath and is graded electronically. Each assignment has a due date but it is a good idea to work ahead. Each online homework completed 24 hours early will receive 2 extra percentage points. The work must have a score of 100% and the maximum overall percentage of online work will not exceed 105%. Extra credit will also be given for helping students on the Forum.

You may repeat online homework as many times as you like until the deadline. If you procrastinate to the deadline, you run the risk of not being able to complete the assignment. If you are working on the assignment just before the deadline and there are technical problems then you will not be able to complete the assignment. If you feel that MyOpenMath is not recording your answer correctly post on the forum with an explanation.

This course consists of 4 units:

Unit 1: Chapters 1 – 5
Unit 2: Chapters 6 – 8
Unit 3: Chapters 9 – 10
Unit 4: Chapters 11–13

Typical Unit Tasks

- Download the Unit Checklist to guide you through the tasks for the unit

- Watch the video lessons found on MyOpenMath

- Read the Lecture Notes

- Use the Forum to ask questions and make comments about the material

- Attend Office Hours

- Do the online homework

- Complete the written homework

- Read the Exam Review found on MyOpenMath in the Course Documents folder

- Taking the Practice Exam found MyOpenMath in the Course Documents folder

- Attend the Exam Review session during Office Hours

- Keep a positive attitude!

Course Learning Objectives:

- Recognize and differentiate between key terms
- Apply various types of sampling methods to data collection
- Create and interpret frequency tables
- Display data graphically and interpret graphs: stemplots, histograms, and box plots
- Recognize, describe, and calculate the measures of location of data: quartiles and percentiles
- Recognize, describe, and calculate the measures of the center of data: mean, median, and mode
- Recognize, describe, and calculate the measures of the spread of data: variance, standard deviation, and range
- Understand and use the terminology of probability
- Determine whether two events are mutually exclusive and whether two events are independent
- Calculate probabilities using the Addition Rules and Multiplication Rules
- Construct and interpret Contingency Tables
- Construct and interpret Tree Diagram
- Recognize and understand discrete probability distribution functions, in general
- Calculate and interpret expected values
- Recognize the binomial probability distribution and apply it appropriately
- Recognize and understand continuous probability density functions in general
- Recognize the uniform probability distribution and apply it appropriately
- Recognize the normal probability distribution and apply it appropriately
- Recognize the standard normal probability distribution and apply it appropriately
- Compare normal probabilities by converting to the standard normal distribution
- Recognize central limit theorem problems
- Classify continuous word problems by their distributions
- Apply and interpret the central limit theorem for means
- Calculate and interpret confidence intervals for estimating a population mean and a population proportion
- Interpret the Student's t probability distribution as the sample size changes
- Discriminate between problems applying the normal and the Student's t distributions
- Calculate the sample size required to estimate a population proportion given a desired confidence level and margin of error
- Differentiate between Type I and Type II Errors
- Describe hypothesis testing in general and in practice
- Conduct and interpret hypothesis tests for a single population mean, sigma unknown
- Conduct and interpret hypothesis tests for a single population proportion
- Conduct and interpret hypothesis tests for a single population standard deviation
- Classify hypothesis tests by type
- Conduct and interpret hypothesis tests for two population means, sigmas unknown
- Conduct and interpret hypothesis tests for two population proportions
- Conduct and interpret hypothesis tests for matched or paired samples
- Conduct and interpret chi-square goodness-of-fit hypothesis tests
- Conduct and interpret chi-square test of independence hypothesis tests
- Discuss basic ideas of linear regression and correlation
- Create and interpret a line of best fit
- Calculate and interpret the correlation coefficient
- Calculate and interpret outliers