

Course Outcome Guide (COG)

| Course: | Math 210: Elementary Statistics | Credits: | 3 | Updated: February 19 th , 2020 | | |
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| Course Description: | Prerequisite: "C" or higher in ASC 093, placement, or Instructor approval. An introduction to statistical methods of gathering, presenting and analyzing data; estimating means, proportions, confidence intervals, and testing hypotheses; probability and probability distributions; and linear regression and correlation. | | | | | |
| Concepts and Issues | Process Skills | Assessment Tasks | Intended Outcomes | | | |
| | | | Course | Program | Institutional | |
| <ul style="list-style-type: none"> • Statistical Studies • Graphs and Displays • Basic Descriptive Statistics • Probability & Counting • Discrete Probability Distributions • Probability Distributions • Binomial Distributions • Normal Distributions • Confidence Intervals • Hypothesis Testing with One Sample • Hypothesis Testing with Two Samples • Correlation & Regression • CHI-Squared Test • Test for Independence • ANOVA | <ul style="list-style-type: none"> • Discuss elements of a statistical study • Construct frequency distributions • Construct graphs to represent data • Determine measures of central tendency and variation • Differentiate between independent & dependent events • Explain mutually exclusive events • Apply permutations and combinations • Describe discrete and continuous probabilities • Find probabilities for normally distributed variables • Confidence intervals for population parameters • Hypothesis testing of claims for population parameters • Calculate correlation and create a regression equation • Use one-way analysis of variance to test claims • Test independence of variables | <ul style="list-style-type: none"> • Complete textbook readings, questions, and problems demonstrating mastery of both concepts and process skills. • Complete examinations demonstrating mastery of both concepts and process skills. | <ol style="list-style-type: none"> 1. Communicate using correct statistical terminology. 2. Calculate measure of central tendency and dispersion. 3. Use hypothesis testing to test a population parameter. 4. Organize data and interpret using regression. | <ol style="list-style-type: none"> 2. Students will use reasoning skills to analyze and solve problems. | <ol style="list-style-type: none"> 2. Students will use reasoning skills to analyze and solve problems. | |