



CORRELATION COURSE REQUIREMENTS

COURSE TITLE: Probability and Statistics

COURSE NUMBER: 1210300

SUBMISSION TITLE: Elementary Statistics: A Brief Version © 2003

PUBLISHER: Glencoe

INTENDED OUTCOMES & SSS/BENCHMARKS (Number and outcome)	PAGE(S) OR LOCATION(S) WHERE TAUGHT	I/M*
After successfully completing this course, the student will:		
1. Collect, organize, display, and analyze data, including measures of central tendency and measures of variability.		
MA.E.1.4.1 interpret data that has been collected, organized, and displayed in charts, tables, and plots.	SE: 35–40, 41–43, 44–46, 47–50, 51–53, 54–56, 57–60, 61–63, 64–67, 68–71, 72–74, 75–78, 79–83, 84–90	I
MA.E.1.4.2 calculate measures of central tendency (mean, median, and mode) and dispersion (range, standard deviation, and variance) for complex sets of data and determine the most meaningful measure to describe the data.	SE: 93, 94–96, 97, 98–99, 100–101, 103–104, 106–110, 141–142, 143–149, 156–160, 161–162	I
2. Compare and contrast data sets using statistics.		
MA.D.1.4.1 describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.	SE: 348–359, 360–369, 370–373, 374–381, 382–387, 388–389, 390–397, 398–400, 401–42, 403–404, 405–411, 412–417, 418–423, 424–430, 431–435, 436–440, 441–445, 446–453, 458–463, 434–470, 471, 476–488, 489–493, 494–499, 500–504, 509–512	I

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MA.D.1.4.2 determine the impact when changing parameters of given functions.	SE: 490–493, 494–500, 510–511	I
3. Demonstrate use of regression analysis to interpret and make predictions using varied mathematical models and statistics, including correlation and residuals.		
MA.D.1.4.1 describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.	SE: 348–359, 360–369, 370–373, 374–381, 382–387, 388–389, 390–397, 398–400, 401–42, 403–404, 405–411, 412–417, 418–423, 424–430, 431–435, 436–440, 441–445, 446–453, 458–463, 434–470, 471, 476–488, 489–493, 494–499, 500–504, 509–512	I
MA.E.1.4.3 analyze real-world data and make predictions of larger populations by applying formulas to calculate measures of central tendency and dispersion using the sample population data, and using appropriate technology, including calculators and computers.	SE: 348–359, 360–369, 370–373, 374–381, 382–387, 388–389, 390–397, 398–400, 401–42, 403–404, 405–411, 412–417, 418–423, 424–430, 431–435, 436–440, 441–445, 446–453, 458–463, 434–470, 471, 542–554, 555–558, 559–561	I
4. Analyze and interpret the design of an experiment (i.e., hypothesis building, sampling, data collection, and data analysis for hypothesis testing).		
MA.E.3.4.1 design and perform real-world statistical experiments that involve more than one variable, then analyze results and report findings.	The opportunity to address this objective is available. See the following: SE: 15–17	M

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MA.E.3.4.2 explain the limitations of using statistical techniques and data in making inferences and valid arguments.	SE: 7, 348–359, 360–369, 374–381, 382–387, 390–397, 401–42, 403–404, 412–417, 424–430, 436–440, 446–453, 458–463, 471	I
5. Demonstrate understanding of experimental probability, theoretical probability, and discrete probability distributions.		
MA.E.2.4.1 determine probabilities using counting procedures, tables, tree diagrams, and formulas for permutations and combinations.	SE: 170–172, 173–174, 175–176, 177–180, 238–243, 244–245, 246–248, 249–250, 251–254	I
MA.E.2.4.2 determine the probability for simple and compound events as well as independent and dependent events.	SE: 182–185, 186–188, 189–192, 193–194, 195–196, 197–200, 201–203, 204–205, 206–209, 210–212, 213–214, 215–217, 218–222, 238–243, 244–245, 24–248, 249–250, 251–254	I
6. Apply sampling, randomness, and distribution concepts in designing or evaluating the validity of experiments.	The opportunity to address this objective is available. See the following: SE: 6–14, 15–17	M
7. Demonstrate understanding of binomial and normal distributions and their properties.	SE: 238–243, 244–245, 246–247, 248, 249–251, 252–254, 258, 259, 260–270, 271–272, 273–279, 280–282, 283–284, 285, 295–300, 301, 302–306	I

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8. Select and demonstrate use of specific statistical techniques for analyzing and transforming data in ways that are appropriate to the experiment design.	The opportunity to address this objective is available. See the following: SE: 15–17	M
9. Demonstrate use of a graphing calculator and spreadsheets for displaying and interpreting data.		
MA.E.1.4.3 analyze real-world data and make predictions of larger populations by applying formulas to calculate measures of central tendency and dispersion using the sample population data and using appropriate technology, including calculators and computers.	SE: 93–96, 97–99, 100–102, 106–109, 110–111, 112–115, 116–118, 119–120, 121–122, 123–126, 138–140, 141–143, 150, 151	M

I = Taught Indepth

M = Mentioned only