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Catalog description of course: An introductory course in statistical procedures with applications to business. Topics include descriptive statistics, the binomial and normal distributions, sampling, hypothesis testing, estimation, correlations, contingency tables, analysis of variance and linear regression with bivariate data, and probability: combinations, permutations, basic counting principal, and odds.

Objectives:
1. Define descriptive statistics and concepts of statistical analysis. Define and give examples of various data types.
2. Organize data graphically. Summarize data using measures of central tendency (mean, median, mode, midrange).
3. Calculate the measures of dispersion (standard deviation, variance).
4. Apply the rules of probability and the binomial distribution.
5. Evaluate and convert data to the standard normal score (z-score) for comparison purposes.
6. Interpret linear correlation and linear regression.

Text: NO TEXT REQUIRED. Some problems are from the following text:

TI 83 Graphing Calculator will be used and checked out from instructor and checked back in on the last day of class.

Course Requirements:
4 Exams (100 points each)
3 labs (20 points each)
Assignments (90 points)
Term Review Packet (50 points)
Total points: 600

Practices concerning Americans with Disabilities, Student Code of conduct and Academic Integrity will follow those outlined in the Doane catalog and student handbook.
**Doane College Academic Integrity Policy:**
The Doane College Academic Integrity Policy will be adhered to in this class. All projects and tests will represent your own work. Any use of others’ ideas and words without proper citation of sources is plagiarism and will result in penalties to be determined by the instructor and/or the dean of undergraduate studies.

**Cooperative Learning is a must.** Students must be able and willing to work with a team or partner on labs, assignments and tests. Time will be allowed in class to accomplish labs and most of the assignments. Students are expected to be respectful, courteous and cooperative.

**Attendance** is strongly recommended but if a class were missed, getting the assignment ahead of time would be better than afterwards. Students must email me if you miss a class. *A small deduction on your assignment points will be made with an absence or tardy.*

<table>
<thead>
<tr>
<th>Dates</th>
<th>Lessons and activities:</th>
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<tbody>
<tr>
<td>March 10, 2016</td>
<td>Intro/terminology, Reaction time lab, Ch. 1 Review</td>
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<tr>
<td>March 17, 2016</td>
<td>Ch. 1 Test, Measures of center and spread, Interpreting different types of graphs, standard score (z-score), Mid-Ch. 2 Review</td>
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<tr>
<td>March 24, 2016</td>
<td>Mid Ch. 2 Test, Random Rectangles, Measures of dispersion, variance, standard deviation, Measures of Position, Frequency distributions</td>
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<td>March 31, 2016</td>
<td>Ch. 3 Binomial Distributions, Bivariate Data, Linear Correlation, Linear Regression, Correlation Coefficient, Scatterplots, Line-of-best-fit</td>
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<td>April 7, 2016</td>
<td>Ch. 4 Rules of Probability, Odds, Permutations, Combinations, Basic Counting Principle, Venn Diagrams</td>
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<td>April 14, 2016</td>
<td>Rolling Rivers Lab, Pass the Pigs Lab, Mutually Exclusive, Independent vs. Dependent Variables, Ch. 4 Review</td>
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<td>April 21, 2016</td>
<td>Ch. 4 Test, The Standard Normal Distribution, Applications of the normal distribution, Ch. 6 Review, Semester Review</td>
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<td>April 28, 2016</td>
<td>Ch. 6 Test, Hand in Semester Review and/or any missing work, check grade, and hand in calculator</td>
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<td>May 5, 2016</td>
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**Grading Scale:**

- 540-600 total points  A
- 480-539 total points  B
- 420-479 total points  C
- 360-419 total points  D
- Below 360  F