

<b>Course</b>	HLTH 5100: Statistics for Health Administration												
<b>Term</b>	Fall 2008												
<b>Instructor</b>	Name: Bruce C. Busbee, MPH Phone: 803-898-3388 Email: Brucebusbee45@Webster.edu												
<b>Catalog Description</b>	This course introduces the use of statistical analysis in health administration. The course emphasizes development of the basic methods and underlying concepts of statistics that are used in management decision making and health services research which include: descriptive statistics, probability sampling, hypothesis testing, forecasting methods, and nonparametric statistics. Statistical applications in epidemiology and health services research are presented.												
<b>Prerequisites</b>	None												
<b>Course Level Learning Outcomes</b>	<ul style="list-style-type: none"> <li>• The student will be able to contrast descriptive and inferential statistics</li> <li>• The student will know when to use non-parametrics</li> <li>• The student will be able to test hypotheses</li> <li>• The student will be able to evaluate basic research</li> </ul> <p>The student will be able to apply statistical methods to management and research questions</p>												
<b>Materials</b>	Required textbook <b><u>Statistics: A First Course</u></b> Sanders & Smidt, McGraw-Hill (Sixth Edition, 2000, ISBN 0-07-233217-4												
<b>Grading</b>	<p>Evaluation</p> <p>Students will have three exams each counting for 25 % of the course grade. Students will also prepare a detailed critique of a health care research article. The critique will be a maximum of five pages doubled spaced. It will be due week 9 of the term. The critique will count for 25% of the grade.</p> <p>Grading Scale: South Carolina regional scale will be used.</p> <table style="margin-left: 20px;"> <tr> <td>A</td> <td>96-100</td> </tr> <tr> <td>A-</td> <td>90-95</td> </tr> <tr> <td>B+</td> <td>87-89</td> </tr> <tr> <td>B</td> <td>84-86</td> </tr> <tr> <td>B-</td> <td>80-83</td> </tr> <tr> <td>C</td> <td>70-79</td> </tr> </table>	A	96-100	A-	90-95	B+	87-89	B	84-86	B-	80-83	C	70-79
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	<p style="text-align: center;">F 0-69</p> <p><b>The GRADUATE catalog provides these guidelines and grading options for graduate business degrees:</b></p> <p>Grades in the program are A, A-, B+, B, B-, C, F, I, ZF, and W. Grades reflect the following standards:</p> <table style="margin-left: 40px;"> <tr> <td>A/A-</td> <td>Superior Graduate work</td> </tr> <tr> <td>B+/B/B-</td> <td>Satisfactory Graduate work</td> </tr> <tr> <td>C</td> <td>Work that is barely adequate as graduate-level performance</td> </tr> <tr> <td>F</td> <td>Work that is unsatisfactory</td> </tr> <tr> <td>I</td> <td>Incomplete work</td> </tr> <tr> <td>ZF</td> <td>An "I" that is not completed within one year of the end of the course is automatically converted to a "ZF". A "ZF" is treated the same as an F or NC for all cases involving GPA, academic warning, probation and dismissal.</td> </tr> <tr> <td>W</td> <td>Withdrawn from the course</td> </tr> </table>	A/A-	Superior Graduate work	B+/B/B-	Satisfactory Graduate work	C	Work that is barely adequate as graduate-level performance	F	Work that is unsatisfactory	I	Incomplete work	ZF	An "I" that is not completed within one year of the end of the course is automatically converted to a "ZF". A "ZF" is treated the same as an F or NC for all cases involving GPA, academic warning, probation and dismissal.	W	Withdrawn from the course
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<p><b>Activities</b></p>	<p>Statistical problems, Health Management examples and critical analyses of a published statistical document (health related)</p>														
<p><b>Policy Statements: University Policies</b></p>	<p>University policies are provided in the current course catalog and course schedules. They are also available on the university website. This class is governed by the university's published policies. The following policies are of particular interest:</p> <p><b>Academic Honesty</b> The university is committed to high standards of academic honesty. Students will be held responsible for violations of these standards. Please refer to the university's academic honesty policies for a definition of academic dishonesty and potential disciplinary actions associated with it.</p> <p><b>Drops and Withdrawals</b> Please be aware that, should you choose to drop or withdraw from this course, the date on which you notify the university of your decision will determine the amount of tuition refund you receive. Please refer to the university policies on drops and withdrawals (published elsewhere) to find out what the deadlines are for dropping a course with a full refund and for withdrawing from a course with a partial refund.</p> <p><b>Special Services</b> If you have registered as a student with a documented disability and are entitled to classroom or testing accommodations, please inform</p>														

	<p>the instructor at the beginning of the course of the accommodations you will require in this class so that these can be provided.</p> <p><b>Disturbances</b>  Since every student is entitled to full participation in class without interruption, disruption of class by inconsiderate behavior is not acceptable. Students are expected to treat the instructor and other students with dignity and respect, especially in cases where a diversity of opinion arises. Students who engage in disruptive behavior are subject to disciplinary action, including removal from the course.</p> <p><b>Student Assignments Retained</b>  From time to time, student assignments or projects will be retained by The Department for the purpose of academic assessment. In every case, should the assignment or project be shared outside the academic Department, the student's name and all identifying information about that student will be redacted from the assignment or project.</p>
<b>Course Policies</b>	<p>Cheating and plagiarism</p> <p>Of course, students are expected to do their own work. Students who claim that someone else's work is theirs may face disciplinary action. Plagiarism can be avoided simply by the use of quotation marks when quoting and citation when paraphrasing someone else's work.</p> <p>Absenteeism</p> <p>Student's who miss more than one class will have to make up additional work. Student's who miss more than two classes may be advised to drop the course or may have their grade lowered commensurately.</p> <p>This syllabus may be revised or changed without prior notice by the instructor.</p>
<b>Weekly Schedule</b>	<p>Week 1 Introduction and class organization: Review of course syllabus, class requirements and grading. Discussion of article critique</p> <p>Chapter 1 What to Expect  Topics  Definitions  Need for Statistics  Describing Relationships between Variables  Statistical Problem-Solving Methodology</p>

	<p>Role of the Computer</p> <p>Chapter 2 Thinking Critically</p> <p>Unfavorable Opinions &amp; the Bias Obstacle</p> <p>Bias Difficulty</p> <p>Aggravating Averages</p> <p>Disregarded Dispersions</p> <p>Persuasive Artist</p> <p>Post Hoc Ergo Propter Hoc Trap</p> <p>Antics and Semantics and Trends</p> <p>Follow the Bouncing Base</p> <p>Avoiding Pitfalls</p> <p>Exercises</p>
Week 2	<p>Chapter 3 Descriptive Statistics</p> <p>Data Collection</p> <p>Data Organization &amp; Frequency Distribution</p> <p>Graphic Presentation of Frequency Distributions</p> <p>Computing Measure of Central Tendency</p> <p>Computing Measures of Dispersions and Relative</p>
Position	<p>Summarizing Qualitative Data</p> <p>Exercises</p>
	<p>Chapter 4 Probability Concepts</p> <p>Basic Considerations</p> <p>Probabilities for Compound Events</p> <p>Random Variables</p> <p>Exercises</p>
Week 3	<p>Review of Chapters 1-4</p> <p>TEST 1</p>
Week 4	<p>Chapter 5 Probability Distribution</p> <p>Binomial Experiments</p> <p>Determining Binomial Probabilities</p> <p>The Poisson Distribution</p> <p>The Normal Distribution</p> <p>Exercises</p>
	<p>Chapter 6 Sampling Concepts</p> <p>Sampling the Need and the Advantages</p> <p>Sampling Distribution of Means</p> <p>Exercises</p>
Week 5	<p>Chapter 6 Sampling Concepts –Continued</p> <p>Sampling Distribution of Percentages</p>

	<p>Exercises</p> <p>Chapter 7 Estimating Parameters</p> <p>Estimate, Estimation, Estimator</p> <p>Interval Estimation of the Population Mean</p> <p>Estimating the Population Percentage</p> <p>Estimating the Population Variance</p> <p>Exercises</p>
Week 6	<p>Review of Chapters 5-7</p> <p>TEST 2</p>
Week 7	<p>Chapter 8 Testing Hypothesis</p> <p>The Hypothesis – Testing Procedure</p> <p>One Sample Hypothesis Test of Means</p> <p>One Sample Hypothesis Tests of Percentages</p> <p>One Sample Hypothesis Tests of Variances and Standard</p>
Deviation	<p>Exercises</p>
	<p>Chapter 9 Inference: Two Sample Procedures</p> <p>Hypothesis Tests of Two Variances</p> <p>Inferences About Two Means</p> <p>Inferences About Two Percentages</p> <p>Exercises</p>
Week 8	<p>Chapter 10 Analysis of Variance</p> <p>Analysis of Variance Purpose and Procedure</p> <p>An ANOVA Example</p> <p>The One-way ANOVA Table &amp; Computers to the Rescue</p> <p>Exercises</p>
	<p>Chapter 11 Chi-Square Test</p> <p>Chi-Square Testing</p> <p>The Goodness of Fit Test</p> <p>The Contingency Table Test</p>
Week 9	<p>Chapter 12 Linear Regression and Correlation</p> <p>Introductory Concepts</p> <p>Simple Linear Regression Analysis</p> <p>Relationship Tests and Predicting Intervals in Simple Linear Regression Analysis</p> <p>Simple Linear Correlation Analysis</p>
	<p>Test Review</p> <p>Test III</p> <p>Article Critique Due</p>

<b>Additional Information</b>	None
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