

<b>Course</b>	BUSN 5760 Applied Business Statistics
<b>Instructor</b>	Name: Dr. Evan W. Barrington Phone: (502) 271-5270 Email: evanb@stevensoncompany.com
<b>Term &amp; Dates</b>	Fall I 2008 Saturday 8:00 am to 12:00 PM
<b>Location</b>	Louisville Metropolitan Campus
<b>Course Description</b>	This course provides an overview of the uses of statistical method used in business. It will focus on the application of these techniques rather than their theoretical derivations. Students will be required to understand the appropriate application of statistical procedures and to demonstrate an ability to perform the proper calculations.
<b>Prerequisites &amp; Incoming Student Competencies</b>	No mathematical background beyond basic algebra is required for this course. Previous exposure to statistics is not essential, but will be to the advantage of the student.
<b>Course Objectives</b>	Upon successful completion of this course, students will: <ul style="list-style-type: none"> <li>• Identify and understand the uses and applications of commonly used statistical measures and procedures.</li> <li>• Recognize appropriate uses and applications of statistical tests and measures.</li> <li>• Develop competency in calculating and applying statistical measures and tests.</li> </ul>
<b>Course Level Learning Outcomes</b>	Upon successful completion of this course, students <b>WILL BE ABLE TO:</b> <ul style="list-style-type: none"> <li>• Implement the basic techniques of statistical analysis, including the ability to perform appropriate calculations.</li> <li>• Identify appropriate applications of statistical analysis to business problems and operations.</li> <li>• Understand the basics of probability theory, hypothesis testing and regression analysis.</li> </ul>
<b>Materials</b>	<p style="text-align: center;">Anderson, Sweeney and Williams, <i>Modern Business Statistics With Microsoft Excel</i>, Third Edition, South-Western, 2009</p> <p style="text-align: center;"><b>Texts can be obtained by calling MBS Direct at 1-800-325-3252, or at Virtual Bookstore at <a href="http://www.mbsdirect.net">www.mbsdirect.net</a>. Credit cards and checks are accepted. Make sure you purchase the correct edition.</b></p>
<b>Supplemental</b>	

<b>Resources</b>													
<b>Grading</b>	<p style="text-align: right;">% of grade</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>A) Term Paper</td> <td style="text-align: right;"><u>None</u></td> </tr> <tr> <td>B) Exams: Mid-term 30%, Final 30% (These are take-home exams)</td> <td style="text-align: right;"><u>60%</u></td> </tr> <tr> <td>C) Class Participation</td> <td style="text-align: right;"><u>10%</u></td> </tr> <tr> <td>D) Class Presentation</td> <td style="text-align: right;"><u>None</u></td> </tr> <tr> <td>E) Other - Assigned problems</td> <td style="text-align: right;"><u>30%</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>100%</u></td> </tr> </table> <p><b>Scoring Criteria: Exams:</b></p> <ul style="list-style-type: none"> <li>Exams will consist of a set of problems similar to those which have been assigned as homework problems. The exams will consist of 10 to 15 problems and 100 points will be possible on each.</li> </ul> <p><b>Scoring Criteria: Homework assignments:</b></p> <ul style="list-style-type: none"> <li>Completing the homework is essential to developing the skills necessary to understand the material and to do well on the exams. Homework will be turned in and graded weekly.</li> </ul> <p><b>Scoring Criteria: Class Participation:</b></p> <ul style="list-style-type: none"> <li>Students should make every effort to attend each class meeting. Students are expected to be attentive in class, and to ask questions and participate in the class environment as necessary.</li> </ul> <p><b><u>Grading:</u></b></p> <ul style="list-style-type: none"> <li>Each exam will include 100 points. Upon completion of grading the exams for all students, the instructor will exam the distribution of scores to determine the appropriate breakpoint between A's, B's and (if necessary) C's. It is expected that all students who properly apply themselves should be able to attain at least a B.</li> <li>Homework problems for the previous week will be reviewed at the first of each class session (prior to the student turning them in.) The instructor will examine them after class; the homework will be returned to the student the following week.</li> <li>The final grade will be determined looking at the total of the 2 exam scores (using the numerical score rather the letter grade described above. A distribution of the combined scores will be utilized in determining the appropriate breakpoints between the various grades.</li> </ul>	A) Term Paper	<u>None</u>	B) Exams: Mid-term 30%, Final 30% (These are take-home exams)	<u>60%</u>	C) Class Participation	<u>10%</u>	D) Class Presentation	<u>None</u>	E) Other - Assigned problems	<u>30%</u>		<u>100%</u>
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<b>Activities</b>													

**Policy Statements:  
University Policies**

**CONDUCT**

Students enrolling in a graduate program at Webster University assume the obligation of conducting themselves in a manner compatible with the University's function as an educational institution. Misconduct for which students are subject to discipline include the following categories:

1. All forms of dishonesty, cheating, plagiarism, or knowingly furnishing false information to the University.
2. Obstruction or disruption of teaching, research, administration, disciplinary procedures, or other University authorized activities.
3. Theft or damage to property at the University.

Students who cheat or plagiarize may receive a failing grade for the course in which the cheating or plagiarism took place. Students who engage in any of the above misconducts may be subject to dismissal from the University. To the extent that penalties for misconduct (e.g. theft or destruction of property) are prescribed by law, the University will consider appropriate actions under such laws.

**ATTENDANCE POLICY**

Students are expected to attend all class sessions of every course. In the case of unavoidable absence, the student must contact the instructor. The student is subject to appropriate academic penalty for incomplete or unacceptable makeup work or for excessive or unexcused absences. Generally, a student who misses more than one four-hour course period (per course) without a documented military or medical excuse and advance permission of the instructor should withdraw from the class. The University reserves the right to involuntarily drop enrolled students from classes, which they do not attend. Students who do not attend the first class session, who have not made prior arrangement with the instructor for being absent, will be dropped from the course.

**MAKE-UP WORK REQUIREMENTS**

For each class missed, makeup work will be assigned and must be submitted at the next class. The instructor will assign the topic and amount of work. This makeup work will be incorporated into the class participation grade. If make-up work is not submitted on time, the student's final grade will be subject to a reduction of one (1) letter grade. Students are responsible for any class material presented during their absence and any assignments due should be submitted prior to the absence, if possible.

**Drops and Withdrawals**

Should you choose to drop or withdraw from this course, the date on

	<p>which you notify the university of your decision will determine the amount of tuition refund you receive. 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 need accommodations for a disability, please let the instructor know at the beginning of the course so that assistance can be provided.</p> <p><b><u>DISCLAIMER</u></b> This syllabus is intended to provide a basic structure to this course. It MAY be modified for class size, student competencies, etc. This syllabus is subject to change at the sole discretion of the instructor.</p>
<p><b>Course Policies</b></p>	
<p><b>Weekly Schedule</b></p>	<p><b><u>Class Preparation</u></b> <b>Pre-Assignment: Briefly review text chapters 1, 2, and 3</b> Note: Details of the problem assignments will be distributed during Week 1</p> <p style="text-align: center;"><b>COURSE SCHEDULE</b></p> <p><b>Week 1      Aug 16 <u>SUBJECT: Introduction to Statistics</u></b>  <b>Topics:</b>  <ul style="list-style-type: none"> <li>◆ Introduction to Statistical analysis</li> <li>◆ Using statistics to describe data</li> <li>◆ Measures of central tendency and dispersion</li> </ul> <b>Assignments for Week 2:</b>  <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapters 2 and 3</li> <li>◆ Preview text, chapter 4</li> </ul> </p> <p><b>Week 2      Aug 23 <u>SUBJECT: Basic Probability</u></b>  <b>Topics:</b>  <ul style="list-style-type: none"> <li>◆ Survey basics of probability theory including: <ul style="list-style-type: none"> <li>• Rules of probability</li> <li>• Counting techniques</li> <li>• Bayes theorem.</li> </ul> </li> </ul> <b>Assignments for Week 3:</b>  <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapters 4</li> <li>◆ Preview text, chapters 5 and 6</li> </ul> </p>

	<p><b>Week 3</b>      <b>Aug 30</b> <u><b>SUBJECT: Probability Distributions</b></u></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ Definition of probability distribution</li> <li>◆ Binomial Probability Distribution</li> <li>◆ Normal Probability Distribution</li> </ul> <p><b>Assignments for Week 4:</b></p> <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapters 5 and 6</li> <li>◆ Preview text, chapter 7</li> </ul>
	<p><b>Week 4</b>      <b>Sept 6</b> <u><b>SUBJECT: Sampling and Sampling Distributions</b></u></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ Sampling distribution of the mean</li> <li>◆ Sampling distribution of the sample proportion</li> <li>◆ Review for the mid-term</li> <li>◆ MID-TERM EXAM TO BE DISTRIBUTED – take home exam to be turned in Sep. 13</li> </ul> <p><b>Assignments for Week 5:</b></p> <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapter 7</li> <li>◆ Complete mid-term exam</li> <li>◆ Preview text, chapter 8</li> </ul>
	<p><b>Week 5</b>      <b>Sep 13</b> <u><b>SUBJECT: Confidence Intervals</b></u></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ The theory and applications of confidence intervals</li> <li>◆ The t-distribution</li> <li>◆ Determining appropriate sample sizes</li> <li>◆ Mid-term exam to be turned in</li> </ul> <p><b>Assignments for Week 6:</b></p> <ul style="list-style-type: none"> <li>◆ Selected Problems Chapter 8</li> <li>◆ Preview text, chapters 9 and 10</li> </ul>
	<p><b>Week 6</b>      <b>Sep 20</b> <u><b>SUBJECT: Hypothesis testing</b></u></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ Review of mid-term exam</li> <li>◆ The theory of hypothesis testing</li> <li>◆ Testing means and proportions for one and two populations</li> </ul> <p><b>Assignments for Week 7:</b></p> <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapters 9 and 10</li> <li>◆ Preview text, chapters 12 and 13</li> </ul>

	<p><b>Week 7</b>      <b>Sep 27 <u>SUBJECT: Nonparametric. Chi-square, ANOVA</u></b></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ Tests of Goodness of Fit and independence (Chi-square)</li> <li>◆ Analysis of Variance</li> <li>◆ Other Nonparametric tests</li> </ul> <p><b>Assignments for Week 8:</b></p> <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapters 12 and 13</li> <li>◆ Preview text, chapters 14 and 15</li> </ul> <p><b>Week 8</b>      <b>Oct 4 <u>SUBJECT: Regression Analysis</u></b></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ The basics of regression analysis</li> <li>◆ Applications of regression analysis</li> </ul> <p><b>Assignments for Week 9:</b></p> <ul style="list-style-type: none"> <li>◆ Selected Problems: Chapters 14 and 15</li> <li>◆ Preview text, chapters 18</li> <li>◆ Review for final exam</li> <li>◆ FINAL EXAM TO BE DISTRIBUTED – take home exam to be turned in Oct 11</li> </ul> <p><b>Week 9</b>      <b>Oct 11 <u>SUBJECT: Issues in Quality Control</u></b></p> <p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>◆ Additional issues in using regression analysis to build models</li> <li>◆ Statistical methods for quality control</li> <li>◆ Course review and summary</li> <li>◆ Turn in final exam.</li> </ul>
<p><b>Additional Information</b></p>	