DSCI 232 BUSINESS STATISTICS II  
SPRING SEMESTER, 2020

Professor: Dr. Mark F. Hartley  
Office: The J.C. Long Building, 9 Liberty Street, #312

Class Hours: DSCI 232-04 T/TH, 9:25 – 10:40AM, Tate 130  
DSCI 304-02: M/W/F, 11:00 – 11:50AM, Beatty 218  
MKTG 333-01: M/W/F, 12:00 – 12:50PM, Tate 315  
DSCI 304-03: M/W, 3:25 – 4:40PM, Beatty 218

Office Hours: T/TH: 11:00AM – 12:00 noon and M/W: 12:30PM – 3:00PM and by appointment.

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doctorhartley@comcast.net (home, put DSCI232 in subject box)

Course Description: Advanced statistical analysis with applications in business and economics utilizing relevant computer software. Topics include business applications in descriptive and inferential statistics emphasizing such topics as simple and multiple regression, analysis of variance, forecasting, quality control, and nonparametric techniques.

Prerequisite: MATH 104 or MATH 250

School of Business learning goals: Quantitative Fluency: Students demonstrate competency in logical reasoning and data analysis skills.

Course Objectives: Consider DSCI 232 as a “tool” course in your business curriculum. Problem solving techniques you will learn in this course are applicable to a wide variety of situations in disciplines such as finance, marketing, and operations management. Statistical methods are simply analytical “tools” to evaluate and solve problems in business and other settings. From the prerequisite course you should have a working knowledge of the following concepts: descriptive statistics, probability analysis and the binomial, poisson, and normal probability distributions, sampling techniques, statistical estimation (confidence intervals) and statistical inference (hypothesis testing), both for means and proportions.

In this course, your objective is to build upon the prerequisite foundation by mastering numerous business applications of the above material as well as applications of additional statistical concepts, techniques, and methods. These include the analysis of variance (ANOVA), both simple and multiple regression analysis, a variety of quality improvement and control techniques, and non-parametric methods such as the Chi-square test. You will also learn to use the MINITAB statistical analysis software package and Excel for the analysis of data and presentation of your results.


Grading Scale:  
A (4.0) 93-100  A- (3.7) 90-92.99  B+ (3.3) 88-89.99  
B (3.0) 83-87.99  B- (2.7) 80-82.99  C+ (2.3) 78-79.99  
C (2.0) 73-77.99  C- (1.7) 70-72.99  D+ (1.3) 68-69.99  
D (1.0) 63-67.99  D- (0.7) 60-62.99  F (0.0) 0-59.99
Approximate Grade Composition:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Prerequisite Review Exam</td>
<td>10%</td>
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<tr>
<td>Regular Exam 1</td>
<td>30%</td>
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<tr>
<td>Regular Exam 2</td>
<td>30%</td>
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<tr>
<td>Regression Analysis Project</td>
<td>10%</td>
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<tr>
<td>Course Service Project</td>
<td>20%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
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All EXAMS are open book and open notes. Since DSCI 232 is very much a problem solving course, much of each examination will be focused on utilizing statistical techniques to solve problems in a variety of business situations. You may always use your calculator as well as computer software to assist in solving problems for the exams.

“Regression Analysis Project” will be essentially a full regression analysis of existing data and the preparation of a report of your findings to be turned in prior to the last exam. This exercise actually prepares you well for the last exam, since you’ll be doing exactly the type of analysis needed for several of the problems on the last exam.

COURSE SERVICE PROJECT occurs in February and will consist of approximately 6 hours of work on a public service experience centered on the operations/supply chain management related activities necessary to manage and carry out a successful major charity event. If you miss or choose not to participate in the course public service project, an alternative assignment taking approximately the same amount of time will be used to earn the points for the course project portion of your grade.

Attendance Policy: Prompt and consistent attendance is necessary for this course. Attendance will be kept each class period. Excessive absences will result as follows:

Absences #1, 2: Allowed for any and all reasons. No need to explain.
Absence #3 and higher: 4 points deducted from your final course average per class missed.

Late Assignments: Assignments handed in for credit after I’ve called for them will be penalized 50 percent per 24 hours late (or fraction thereof).

Honor Code: Cheating in any form is NOT allowed and will be rewarded, AT A MINIMUM, with a grade of F in the course. If copying is involved, both parties will be judged equally guilty.

SNAP Accommodations: Any student certified by the SNAP Office at the College must provide the professor appropriate documentation WELL PRIOR to any exam in which the student requests the SNAP accommodation (i.e., extra time to complete the exam).

Make-Up Exams: Regular exams will not be made up for any reason. Should you miss an exam, a comprehensive final exam COULD be substituted in its place. However, only under the utmost extreme case will your grade be obtained in this manner, and my permission is required to obtain your grade in this manner. You really don’t want to do this.

Grading Errors: If an error is made in grading your exam, the mistake will gladly be corrected. It is YOUR responsibility to detect any error and bring it to my attention ON THE DAY the exam is returned to you. You FORFEIT your right to appeal errors by being absent on the first day the exam is returned, or by waiting until later in the semester to contact me.
Please Note: To get your own free copy of the MINITAB software needed for data analysis in the course, go to www.minitab.com and download it to your computer. You can also access the software anywhere on campus, including our classroom, the library, etc.

Basic Requirements for the Course:

1. Bring your textbook to class each day.
2. Keep a binder or folder for your class notes and handouts. Bring it to class each day.
3. Bring a calculator to class each day, and know how to operate it properly.
4. Keep all of your hand-in assignments backed up during the semester.
5. If you don’t have one already, obtain an off-campus e-mail account immediately.
6. Be on time. Habitual tardiness WILL affect class your grade.

Finally: If a problem develops during the semester or if you feel you need extra assistance with concepts in the course, don’t hesitate to come to my office for help. The last thing I want is for you to do poorly in the course. Use my office hours for your benefit. That's why I have them.

General Course Outline:

MATH 104 Review Exam: Chapters 1-8 of the ASW text (Generally, descriptive statistics, probability, discrete and continuous variables, sampling distributions, and one sample confidence intervals for means and proportions.)

Regular Exam #1: All of the above plus Chapters 9-11 (Generally, all prerequisite material plus one and two sample hypothesis testing for means, proportions, and variances, goodness of fit tests, and analysis of variance.)

Regular Exam #2: Chapters 12-15 (Generally, simple regression, multiple regression, and multiple regression model building, time series analysis, forecasting, and quality control methods.)