Calhoun Community College  
Instructor: James M. Payne  
Business Statistics II (BUS 272)  
Course Syllabus  

Section Days Time Room Final Exam Date & Time  
BUS 272-100 TTh 11:00am- 12:15pm NR154 Tues., Dec. 11, 11:00am  

Max. # of permitted unexcused absences  
4  

Office: NR152  
Telephone, etc.: 306-2684; fax 306-2506; e-mail: jmp@calhoun.edu (email preferred)  
Instructor's Website: http://webnt.calhoun.edu/distance/internet/business/eco231  
(http://www.busccc.net will become operational during the semester)  
Office Hours: Monday & Wednesday: 12:20 – 2:30pm ; Tuesday & Thursday: 8:30 – 9:30am, 12:20 – 2:30pm  
Friday: 9:00am – 1:00pm  

I. Catalogue Information  
A. Business Division/Business Administration Department  
B. Prerequisite: Business Statistics I (BUS 271). If you have not successfully completed that course, you may not enroll in this one. In addition, familiarity with the use of an Windows personal computer and spreadsheet application software, will be very helpful. (While not required, I suggest that you have taken and passed CIS 146, Microcomputer Applications, or have equivalent computer skills)  
C. Three (3) semester hours credit  
D. Catalogue description: "This course is a continuation of Business Statistics I. Topics include sampling theory, statistical inference, regression and correlation, chi square, analysis of variance, time series, index numbers, and decision theory."  

II. Resources (required unless noted)  
C. (NOTE: These two are bundled together at the bookstore. Be sure that you purchase the textbook, the CD-ROM, and the manual. Sorry, but this is the last term we'll be using the text.)  
D. (Optional). The study guide which accompanies the textbook. Some students find this helpful.  
E. Pencils and eraser. Do not use pens.  
F. Statistical or scientific calculator. The one you used for BUS271 and MTH112 is sufficient  
G. A USB flash drive. They're really cheap now, and almost indispenisble. You'll use this for all your computer homework and your project. If you don't have one and your finances are tight, see me.  
H. IBM compatible personal computer, internet connection, and browser software. If you do not have this at your personal disposal you may use the computers in Business/CIS Division Lab (NR122).  

III. Topic Outline  
• Review of BUS 271  
• Chapter 11. Inferences About Population Variances  
• Chapter 12. Tests of Goodness of Fit and Independence  
• Chapter 13. Experimental Design and Analysis of Variance  
<<Reserve reading assignment 1 due next class following exam 1 >>  
EXAMINATION I  
• Chapter 3. Descriptive Statistics: Numerical Measures (Section 3.5 only: Measures of Association Between Two Variables)  
• Chapter 14. Simple Linear Regression  
• Chapter 15. Multiple Regression  
• Chapter 16. Regression Analysis: Model Building  
<<Reserve reading assignment 2 due next class following exam 2 >>  
EXAMINATION II  
<<Computer regression analysis project follows here>>  
• Chapter 17. Index Numbers  
• Chapter 18. Forecasting  
• Chapter 19. Nonparametric Methods  
• Chapter 21. Decision Analysis  
<<Reserve reading assignment 3 due last class before final exam >>  
FINAL EXAMINATION  

IV. Instructional Methods  
A. Homework problem solving  
You are expected to spend 2-3 hours outside of class for every hour spent in class!  
Please note that spending time on homework is essential for success in BUS 272. This is not an easy course.  
B. Classroom problem solving  
C. Computer assignments
D. Lecture

V. Evaluation (Grading) of Student’s Work (Subject to Change)

<table>
<thead>
<tr>
<th>Item</th>
<th>Points</th>
<th>Percent</th>
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<tbody>
<tr>
<td>A. Two (2) hourly examinations @ 100 pts.</td>
<td>200</td>
<td>40%</td>
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<tr>
<td>B. Comprehensive final examination</td>
<td>100</td>
<td>20%</td>
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<tr>
<td>C. Computer homework &amp; required reading summaries</td>
<td>100</td>
<td>20%</td>
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<tr>
<td>D. Research project</td>
<td>100</td>
<td>20%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>500</strong></td>
<td><strong>100%</strong></td>
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Grading scale-divide total points scored by total possible:
A: 90% or more; B: 80% - 89%; C: 70% - 79%; D: 60% - 69%; F: below 60%
Thus, your grade can be calculated at any time as current points scored ÷ current points possible

Problem-solving will form the basis of the exams. Use PENCIL only. Some questions on concepts and required readings will be included. All written homework and computer homework for all chapters of each section will be collected on exam days and will be worth 10% of the exam grade.

VI. Attendance Policy

Come to class. You’ll be sorry if you don’t.

The college attendance policy will be strictly interpreted and adhered to. A copy of that policy is attached at the end of this syllabus. Specific notes for this course include:

- You will be involuntarily withdrawn from the course roll if you exceed the maximum permitted number of unexcused absences for this course. This number is shown at the top of this syllabus.
- Acceptable excuses for absences will be strictly limited to those listed in the college policy and documentation must be provided. No other causes for absence will be considered valid excuses. Please note that family vacations, work-related absences, and illness are not included in this list. You have an allotment of unexcused absences. Do not use them for light or foolhardy reasons.
- Attendance will be taken at the beginning of class, as a rule, but may be taken at any time during the class period. If you are absent when the roll is called, you will be counted absent for the entire class period. I will not distinguish between tardiness and absence. If you wish to be counted as present, make sure you are in class when the roll is called. (If you arrive after your name has been called but before the last student’s name has been called, please make your presence known to the instructor and be sure that you are credited with attendance. And if you arrive after that, please do not ask to be marked as present, as you will not.)
- In summer session and other long-period classes during which a break is given, attendance may be taken both before and after the break. If this is done, missing either will accrue one-half of an absence. Note that if you make a habit of leaving class at the break, you will accumulate unexcused absences.
- I will keep a record of your absences. As the policy states, you should do the same.
- Requests for exceptions will be considered, but circumstances will have to be truly exceptional.

I am sorry to have to take such a hard line on this, but the level of absenteeism that we’ve reached and the cavalier attitude toward class and study that has arisen in the Calhoun student body have become intolerable.

VII. Makeup Policy

A. Hourly exams and all homework:

No makeups.

If you miss an exam, your final exam score will count double. If you miss a second (or further) exam, you will receive a zero for that exam. No makeups of any kind for homework.

B. Final Exam: Makeups allowed only for truly exceptional circumstances, e.g., death in the immediate family, serious illness, or auto accident, at the sole discretion of the instructor. Documentation will be required.

VIII. Classroom decorum

Things have reached a pretty bad state when a Yankee has to instruct his Southern students on basic manners.

You shall follow these rules while in my classroom:

- Cellphones must be silenced; if you set your phone to vibrate mode, please do not place it on the table or other location where it will make an audible sound. No cellphone conversations or text messaging while in the classroom. Please do not get up and leave the classroom to make or answer a cellphone call. (If you are anticipating an urgent call which will require your response, please notify me when you come to class and sit as near the door as
possible. If you receive an emergency call, please leave, and re-enter, the room as quietly and unobtrusively as possible. (I'd appreciate a brief explanation afterward.) Cellphones may not be used as calculators on quizzes or exams. Students who become cellphone nuisances will be asked to leave either their cellphones or themselves at home.

- No iPods or other similar devices may be used during class. Laptop computers may not be used during class. You have my permission to use an audio ("tape") recorder to record, inobtrusively, class lecture and discussion at any time. If you wish to make a video recording of a class, please contact me.
- Please do not make a habit of coming to class late. I can understand occasionally arriving a few minutes late, but not serial tardiness. If you show signs of doing this early in the semester, I will request that you either reform or withdraw. The same goes for leaving class early. If you do arrive late or intend to leave early on a particular day, please sit near the door and make as little commotion as possible. (If you have an event which requires your attendance and necessitates your early departure, please notify me at the beginning of class. You will see to it that these events are infrequent.)
- Please do not leave the classroom to go to the restroom, drinking fountain, or whatever irresistible force it is that seems to pull students out of the classroom as if by magnetism. The regular-session class periods aren't that long, and we'll take breaks during the long ones. Take care of your affairs before class. That might require advance planning on your part.
- Ladies: No ballcaps or other billed or brimmed caps may be worn. Gentlemen: In deference to long-standing, though much ignored, tradition, you may not wear hats or caps of any kind.
- Please be alert. Act like you are alive. Take notes when the occasion calls for it. If you wish to sleep, go elsewhere.
- No cheating on quizzes, exams or other work. If you cheat on any assignment, you will receive a zero for it. And you should withdraw from the course to spare yourself the further indignities which I promise will come your way.

THESE ARE THE RULES. IF YOU BELIEVE THAT YOU CANNOT ABIDE BY THEM, OR DO NOT INTEND TO ABIDE BY THEM, THEN YOU SHOULD WITHDRAW FROM THE COURSE NOW.

IX. Withdrawal Policies
   . . as per Calhoun Catalogue.

X. Americans with Disabilities Act (ADA)
   If you have a disability that might require special materials, services, or assistance, please contact Calhoun’s Disability Services Office in the Chasteen Student Center, Room 218 (Decatur Campus) or call 256/306-2630 or 256/306-2635.

XI. Conduct Expectations/Academic Honesty/Withdrawal Policies
   . . as outlined in the current Calhoun State Community College General Catalog and Handbook. Also please note that leaving the classroom during class will generally not be permitted. You will not be allowed to leave the room during an exam.

XII. Boilerplate required by the College and/or the State
   The following items are included to comply with directives from the Alabama Department of Postsecondary Education, the College, or both.

A. The College and the Alabama State Board of Education are committed to providing both employment and educational environments free of harassment or discrimination related to an individual's race, gender, religion, national origin, age, or disability. Such harassment is a violation of State Board of Education policy. Any practice or behavior that constitutes harassment or discrimination will not be tolerated.

B. The Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act of 1990 state that qualified students with disabilities who meet the essential functions and academic requirements are entitled to reasonable accommodations. It is the student’s responsibility to provide appropriate disability documentation to the College. If you have a disability that might require special materials, services, or assistance, please contact Calhoun’s Disability Services Office in the Chasteen Student Center, Room 218 (Decatur Campus) or call 256/306-2630 or 256/263-263.

C. Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid.

D. Students should consult the College Catalog regarding whether this course is required in their major/program of study.
Unmarked assignments are to be worked with "pencil, paper, and calculator."

Computer assignments are marked with a *. Submit your Minitab project files by copying them to the appropriate folder on the S: drive in the Business Division Lab (NR122). (We’ll go over this before the first set is due.) **This is the ONLY way I will accept the computer assignments.** Do NOT print them out and hand them in on paper. They’re due the day of the appropriate exam.

Page numbers refer to Weiers, 5th ed., and show the page on which the exercise set begins.

Assignments are subject to change by addition or deletion.

Homework for each section of the course is due on the appropriate exam day.

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**I strongly recommend that, when practicing for the exams, you work unassigned problems from the chapter reviews.**

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### Part 1. Review of BUS 271

**Chapter 1**

- a. Supplement 1 All

**Chapter 3**

- Refer to the following sample data.

<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th>q</th>
<th>t</th>
<th>v</th>
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<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>0</td>
<td>12</td>
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<tr>
<td>2</td>
<td>1</td>
<td>18</td>
<td>13</td>
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<td>11</td>
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<tr>
<td>7</td>
<td>4</td>
<td>9</td>
<td>13</td>
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</table>

For each of the variables q, t, and v, find:

- a. arithmetic mean
- b. median
- c. variance
- d. standard deviation
- e. coefficient of variation

b. Refer to your work in the previous exercise. Which variable shows the greatest overall dispersion? Explain.

- c. p.82 3.14, 3.15
- d. p.92 3.26, 3.27
- e. p.100 3.37, 3.38

**Chapter 4**


**Chapter 5**

- a. p.193 5.61, 5.64, 5.71, 5.73, 5.78, 5.82, 5.83

**Chapter 6**

- a. p.207 6.1, 6.9, 6.13, 6.15
- b. p.220 6.16, 6.17, 6.29, 6.32
- c. p.229 6.44, 6.45

**Chapter 7**

- a. p.280 7.66, 7.68

**Chapter 8**

- a. p.289 8.1 - 8.4
- b. p.297 8.9, 8.11

**Chapter 9**

- b. p.334 9.40

**Chapter 10**

- a. p.384 10.37
Chapter 11

a. p.430  11.14  t-test for two $\mu$ w/pooled variances
b. p.450  11.51  t-test for $\mu$ of two dep. samples
c. p.457  11.65  z-test for two proportions

c. p.401  10.78  hypothesis test of one proportion (use z)

Part 2. BUS 272

Exam 1

Chapter 10

a. p.408  10.79, 10.81, 10.82, 10.83  power of a test

Chapter 11

a. p.466  11.69 - 11.71  F-test of two variances
b. p.466  11.72, 11.73  F-test of two variances
c. p.437  11.21 - 11.23  t-test w/unequal variances
d. p.437  11.28, 11.29  t-test w/unequal variances

Chapter 12

a. p.484  12.1 - 12.7, 12.9, 12.10, 12.12  ANOVA concepts
c. p.499  12.24, 12.26, 12.29, 12.30  One-way ANOVA
d. p.514  12.40 - 12.44, 12.51, 12.52, 12.54, 12.56  Randomized block ANOVA
e. p.490  12.50 - 12.52  Randomized block ANOVA
f. p.528  12.67, 12.68, 12.71, 12.73, 12.74  Two-way ANOVA
g. p.528  12.72, 12.73, 12.75  Two-way ANOVA

Exam 2

Chapter 15

b. p.661  15.40 – 15.42  Correlation
c. p.648  15.1 – 15.4, 15.10, 15.11  Simple OLS regression
d. p.648  15.12 - 15.14  Simple OLS regression
e. p.655  15.15 – 15.17, 15.20-15.23  OLS Interval estimates
f. p.655  15.27, 15.28  OLS Interval estimates
g. p.668  15.44, 15.45, 15.49, 15.50, 15.53, 15.54  Estimation and tests
h. p.669  15.57, 15.59  Estimation and tests
i. p.677  15.60-15.63  Additional topics
j. p.677  15.67, 15.68  Additional topics

Chapter 16

a. p.696  16.1, 16.2  Multiple OLS regression
b. p.700  16.5 – 16.9  Multiple OLS regression
c. p.700  16.11, 16.12, 16.14  Multiple OLS regression
d. p.707  16.17, 16.19  OLS Interval estimates
e. p.707  16.22, 16.23  OLS Interval estimates
f. p.712  16.25-16.27, 16.29  Multiple correlation
g. p.712  16.31, 16.32  Multiple correlation
h. p.717  16.33, 16.35, 16.36  Significance tests
i. p.717  16.42, 16.43  Significance tests
j. p.727  16.47  Multiple OLS regression on the PC
k. p.727  16.49, 16.50, 16.55  Multiple OLS regression on the PC
l. p.731  16.56-16.59  Additional topics
m. p.731  16.60  Additional topics
n. p.737  16.69  Practice
o. p.738  Thorndike Sports Equipment case study

Chapter 17

a. p.754  17.4-17.6  Polynomial models
b. p.754  17.7, 17.9, 17.10  Polynomial models
g. p.761  17.16, 17.19, 17.20  Polynomial models
b. p.764  17.25  Dummy variables
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<tr>
<td>h.</td>
<td>p.764</td>
<td>17.27, 17.28</td>
<td><strong>Dummy variables</strong></td>
</tr>
<tr>
<td>c.</td>
<td>p.768</td>
<td>17.32</td>
<td><strong>Data transformations</strong></td>
</tr>
<tr>
<td>i.</td>
<td>p.768</td>
<td>17.33, 17.36 (But use natural logs, i.e, base e)</td>
<td><strong>Data transformations</strong></td>
</tr>
<tr>
<td>d.</td>
<td>p.771</td>
<td>17.37-17.40</td>
<td><strong>Multicollinearity</strong></td>
</tr>
<tr>
<td>j.</td>
<td>p.771</td>
<td>17.42, 17.45</td>
<td><strong>Multicollinearity</strong></td>
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<tr>
<td>e.</td>
<td>p.779</td>
<td>17.46, 17.47</td>
<td><strong>Stepwise regression</strong></td>
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<tr>
<td>k.</td>
<td>p.779</td>
<td>17.52</td>
<td><strong>Stepwise regression</strong></td>
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<tr>
<td>l.</td>
<td>p.784</td>
<td>17.61, 17.63, 17.66</td>
<td><strong>Practice</strong></td>
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**Chapters 13, 14, 18, & 19--TBA**