

**ECON 3406, section N01 – BUSINESS STATISTICS II – Summer 2016.**  
**CRN: 50546. Meets: Online.**

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Office Hours: by appointment.

**DEVICES AND SOFTWARE REQUIRED:** A webcam, at least 4GB of computer RAM, and Excel. In Excel, you need access to “data analysis”. If you don’t have it installed, you need to add the “analysis toolpack” add-in.

**VERY IMPORTANT:** This is a 100% online course. However, it is not a “work-at-your-own-pace” type of course since there are specific dates to take tests and complete assignments. If you anticipate having problems submitting work on time and/or taking tests on the specific dates provided, you should not take this course. There will not be a change in those dates to either earlier or later dates.

Every test needs to be recorded using “Tegrity,” a recording software included in the textbook website (McGraw-Hill Connect). Read (and watch) instructions at the D2L course homepage. To test your computer and webcam system, a “tegrity (two-question) quiz recording” should be submitted first following the instructions shown in D2L. This quiz should be submitted during the first week of classes. If you do not submit this quiz and do not submit a video of test 1, you will be dropped from the course by the end of week 2 (6/19). If you have problems recording the tegrity quiz, you may take supervised tests at UWG on Fridays, 10am, RCOB 1317, during the three-day period of each test. However, you need to let me know in advance that this will be your choice. To summarize, for test taking, there are only two options: either take the test using your computer and recording yourself using tegrity or take the test on Friday at 10am in the Economics department. There are no other options.

**REQUIRED TEXT:** Statistical Techniques in Business & Economics, 16<sup>th</sup> Edition. Authors: Lind, Marchal, Wathen. Buy the textbook using the “MH Campus” link, inside the “start here” module in D2L. All assignments, including the tests, will be submitted at this website. If you already paid for the textbook when you took Econ 3402 (Stats I), you don’t need to pay again. Just submit your username and password, but login using D2L.

**COURSE DESCRIPTION:** Course emphasis is on applications of statistics in business.

Topics include:

- Review of important statistics concepts such as mean, median, variance, standard deviation, scatter plots, normal probability distribution, standard normal probability distribution, Z scores and Z table reading, sampling distribution of the mean, the central limit theorem, estimation and confidence intervals.
- Review and in-depth coverage of hypothesis testing.
- Two-sample tests of hypothesis, analysis of variance.
- Review and in-depth coverage of correlation and linear regression.
- Multiple regression analysis.

**PREREQUISITES:** MATH 1111 or MATH 1113, CISM 2201 and a 2.0 minimum GPA.

### **EXPECTED LEARNING OBJECTIVES**

Students will:

- Use continuous probability distributions and sampling distributions in a variety of business applications. (LG2, LG3, LG6, LG12)
- Construct and interpret interval estimates (LG2)
- Perform hypothesis testing for one and two samples
- Estimate regression models, evaluate the results of regression models, and use the results for prediction and forecasting. (LG2, LG3, LG12)
- Use Microsoft Excel to generate descriptive statistics and perform regression and correlation analysis (LG2, LG3, LG12).

Note: A complete list of expected learning goals (LG) for the Economics Department can be found at the department web site (<http://www.westga.edu/econ/1718.php>).

**“CONNECT” ASSIGNMENTS:** At the textbook website, you will be required to complete two assignments: LearnSmart and Homework.

LearnSmart is assigned per chapter and it contains a series of questions that review the most important material. I recommend you to complete this assignment before anything else. As you take this assignment, the textbook will be highlighted in the areas that you need to review and the correct answers are revealed. After you finish responding to all the questions, you'll have another chance to respond again to those that you submitted wrong the first time. That process repeats until you may get all the answers correct. A video link demonstrating how to submit this assignment in Connect is found in the “start here” module.

A homework is assigned per chapter and it contains a set of questions based on exercises found in the textbook. It has no time limit and you will have up to two attempts to complete it. As you respond each question, you will have the option to “check your work” to verify whether it is correct or not. After the due date, answers and feedback will be available. The highest grade will be recorded.

**Important:** a significant number of exercises found in both the homework and the tests must be solved using Excel. You need to have Excel 2013 or later version installed in your computer.

Weights: ten percent for homework, five percent for LearnSmart. Both assignments are due by 8am on the day each test opens. Advice: complete assignments ahead of time. The deadlines will not be postponed regardless of reason.

**TESTS:** During the (eight-week) semester, you will be required to take four tests. One after completion of each part of the course. Part I: review of chapters 3, 7-9, part II: chapters 10 & 11, part III: chapters 12 & 13, and part IV: chapter 14 and regression assignment. All tests will be taken at the McGraw Hill (Connect) website using “Tegrity.” Rules to take the tests:

- You will be allowed to use any notes you want, but you have to take each test individually.
- You must have a webcam installed and connected to your computer.

- Each test is available during three days (Thursday-Saturday). You may take it at any time during those three days up until 11pm on Saturday (due by 11:59pm, Saturday). The dates will not be changed, regardless of reason.
- Each test has a time limit of one hour. Questions on each test are similar to those found in the homework and practice exercises. However, the option “check my work” is not available on the tests.
- No make-up tests will be given, unless you show a valid excuse demonstrating inability to access a computer during those three days. For example, hospitalization requiring care in an ER or ICU.
- A tegrity video must be submitted with every test. Otherwise, your test grade will be a zero.
- If you anticipate not being able to submit a tegrity video, you must take the test Fridays at 10am at the RCOB (2<sup>nd</sup> floor) computer lab.
- Advice: do not wait until Saturday night to take each test.

Percent of final grade assigned to tests: 20 percent each.

**REGRESSION ASSIGNMENT:** Based on the material learned in chapter 14, you will be assigned an Excel regression exercise due by 8am on the first day of test 4, or final exam. The instructions and specific exercise will be posted in D2L right after test 3. Grade weight: 5%.

**CHEATING:** Academic dishonesty on any exam will result in a zero on that exam, a note recording the incident on the student's permanent record and the student reported to Student Services for appropriate disciplinary action by the University. Students not familiar with what constitutes academic dishonesty or those unfamiliar with the appeal procedure regarding academic dishonesty should refer to the UWG Undergraduate Catalog.

For this course, cheating would consist of taking the test with at least a second person, or have somebody else taking it for you.

#### **GRADE DISTRIBUTION BY ACTIVITY**

<b>ACTIVITY/MATERIAL</b>	<b>DATE</b>	<b>WEIGHT</b>
Homework	Online (due by 8am the first day each test opens)	10%
Learnsmart	Online (due by 8am the first day each test opens)	5%
Test 1 (chapters 3, 7-9)	Th – Sat (6/16 – 6/18)	20%
Test 2 (chapters 10 & 11)	Th – Sat (6/30 – 7/2)	20%
Test 3 (chapters 12 & 13)	Th – Sat (7/14 – 7/16)	20%
Test 4 (Chapter 14)	Th – Sat (7/28 – 7/30)	20%
Regression Assignment	Due by 8am, 7/28 (use both MH and D2L dropbox)	5%

#### **WHAT YOU NEED TO DO TO GET A GOOD GRADE IN THIS COURSE:**

1. Start from day one reading the syllabus and instructions for assignments. Get familiar with MH Connect. Check the different chapters and sections of the ebook. For example, click on “end matter” and you’ll see all the Appendixes, including answers to all the odd-numbered exercises (appendix D), all Excel commands per chapter (appendix C) and important statistical tables (normal, t-student, F-table).

2. Study daily. Remember that this is an intensive, short, course.
3. Read the textbook while taking the LS assignments. Make sure you understand every question.
4. Watch every video. Most FAQs are answered in the videos.
5. Practice solving exercises whose answers are in the textbook.
6. Submit your homework assignments only after you have studied the chapters and done the corresponding LS assignments.

**Final Letter-Grade Assignment (strictly enforced):**

0 – 59.99: F

60 – 69.99: D

70 – 79.99: C

80 – 89.99: B

90 – 100: A

**After assignments listed in the syllabus are completed, no extra assignments or bonus questions will be assigned to improve your grade.**