

# Course Syllabus for ECON 3402: Business Statistics 1

- **Instructor:** Dr. Michael Sinkey
- **UWG E-Mail:** msinkey@westga.edu (I will send e-mails from this address.)
- **Website:** I will use D2L to post course materials. I do not respond to e-mails via Courseden in any sort of timely manner. Please send directly to my UWG account.
- **Phone:** 678-839-5166
- **Office and Office Hours:** Miller Hall (RCOB) 1313. I will be from 930-11 AM Tuesdays and Thursdays on campus as well as some lunch breaks and one other day every two weeks. Appointments are also possible.
- **Class Time and Location:** This class meets Tuesdays and Thursdays from 11:00 AM to 12:15 PM in Miller Hall room 2328. (This is the computer lab).
- **Required Text:** We are using Lind/Marchal, 17th edition, Statistical Techniques in Business and Economics. Everyone is required to purchase the online version of the book with the Connect software. There is a registration sheet online to help.

**Class Description:** Businesses make decisions using data. Many individuals are well-compensated solely for their ability to analyze data and provide policy recommendations. In this class we will learn what data are, how they are generated, and how they should be analyzed.

**Class Requirements:** You are not required to come to class, but in all likelihood you will not perform well if you miss too many classes. It has been my experience that strong performance and attendance are highly correlated. I expect you to be here. Most of you are sufficiently unfamiliar with statistics to struggle without explanation. Additionally, there will be material from class on exams that may not be covered in the readings, homework, or online modules. Nonetheless, if you miss class, you need to either get notes from a classmate or me.

**Expectations and Grades:** There will be three midterms, a final, three problem sets, and a series of Connect homework assignments. Each midterm will be worth twenty percent of your grade; the final will be worth fifteen percent of your grade. **No tests are dropped for any reason.** The problem sets are worth ten percent of your grade and I take the best two out of three problem sets. I grade problem sets based on accuracy in order to ensure that you take the assignments seriously and in order to let you know if you are not understanding the material. Additionally, we will be using Connect software for additional practice. This is completion-based and is worth fifteen percent of your grade. The class is out of 300 total points. Please do not wait to get help until you are completely lost. I consider it your responsibility to figure out something specific to ask in an e-mail so we have a starting place.

**Grades and Grade Distribution:** As of today, the grade distribution will be: 90+=A, 80-89.99=B, 70-79.99=C, 60-69.9=D, < 60 =F. I reserve the right to lower this grade distribution if necessary. In the past, this grade distribution has yielded roughly 25 percent A, 25 percent B, 30 percent C, and 20 percent something else.

**Late Work:** I will not accept any late work because I will be posting answers to the problem sets online for you to use to study for exams, and once you get the answers, there's no point in turning in the homework.

**Extra Credit:** Any extra credit available for this class will be described later in the semester but as of today there is none.

**Class Format:** The class will be a lecture format. Slides will be posted online. I try to follow the slides to aid in understanding, but frequently work examples from the book or questions from class that are not from the slides. Ask questions! I have my suspicions as to what you find difficult, but the only way I can fix the problem is if you take initiative to figure out what you don't know.

### Course Learning Objectives

The overall objective of this course is for you to learn basic economic concepts and more about the economic system in which we live. To this end, upon completion of the course a student will be able to:

1. construct and interpret tabular and graphical methods of presenting qualitative and quantitative data (LG2, LG3, LG10)
2. construct and interpret summary and numerical measures of location, variability, and association for the sample and the population (LG2, LG3, LG10)
3. apply basic probability concepts, expected value and variance to a variety of different business applications (LG2, LG6, LG10)
4. use discrete and continuous probability distributions and sampling distributions in a variety of business applications (LG2, LG3, LG6, LG10)
5. construct and interpret interval estimates and hypothesis tests (LG2)
6. estimate regression models, evaluate the results of regression models, and use the results for prediction and forecasting (LG2, LG3, LG6, LG10)
7. Use Microsoft Excel to generate descriptive statistics and perform regression and correlation analysis (LG2, LG3, LG6, LG10)

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/index\\_12904.php](http://www.westga.edu/econ/index_12904.php)

**Common Language for Course Syllabi:** University policy, as well as the response to HB 280, can be found here:

[https://www.westga.edu/academics/assets/docs/Common\\_Language\\_for\\_Course\\_Syllabi.pdf](https://www.westga.edu/academics/assets/docs/Common_Language_for_Course_Syllabi.pdf). **Class**

### Policies

- Do not insult, belittle, or make fun of other students in class. Don't listen to music. Do not misbehave in class (think excessive talking and disrespect). If you do not want to be in class, don't come; there is no penalty for not attending. If an incident occurs once, you will be dismissed from my class for the rest of the class. If it occurs twice, you will be dismissed for the rest of the term.
- Makeups are my sole discretion, but all makeup exams must be taken at 9:00 AM the next class period. If you cannot make the exam makeup, you will receive a zero unless you are hospitalized or a close family member is hospitalized or has passed away. Requests to take exams in advance can usually be accommodated.
- No smartphones as calculators. It's statistics, so bring a calculator to the exam.
- Cheating occurs in this class when:
  1. You turn in the same Excel or Word file as another student (or it is too close to call)
  2. You use anything other than a basic calculator for a test
  3. You communicate during a test or leave during a test to get help

I will give you a zero on the assignment or exam if you do any of these things and will report you in accordance with our honor code.

**Official UWG Credit Hour Policy:** The University of West Georgia grants one semester hour of credit for work equivalent to a minimum of one hour (50 minutes) of in-class or other direct faculty instruction AND two hours of student work outside of class per week for approximately fifteen weeks. For each course, the course syllabus will document the amount of in-class (or other direct faculty instruction) and out-of-class work required to earn the credit hour(s) assigned to the course. (For this class, we follow the university's minimums pretty closely on average). Out-of-class work will include all forms of credit-bearing activity, including but not limited to assignments, readings, observations, and musical practice. Where available, the university grants academic credit for students who verify via competency-based testing, that they have accomplished the learning outcomes associated with a course that would normally meet the requirements outlined above (e.g. AP credit, CLEP, and departmental exams).

**Schedule (may change, we could fall behind)**

Date	Class Number	Chapter Covered	Statistics Topic Covered
8/10	1	1	What is Statistics
8/15	2	2	Examining Distributions Using Graphs
8/17	3	3, 4	Numerical Measures, Standard Deviation, 5 Number Summary
8/22	4	7	Normal Distribution, z-scores, etc.
8/24	5	7	Normal Distribution, z-scores, etc.
8/29	6	13	Regression
8/31	7	13	Regression <b>PS 1 due</b>
9/5	8	Exam 1	<b>Exam 1</b>
9/7	9	5	Introduction to Probability
9/12	10	5	Probability Rules
9/14	11	6	Random Variables, Mean and Variance
9/19	12	6	Binomial Distribution
9/21	13	6	Poisson Distribution
9/26	14	7	Uniform and Exponential Distributions <b>PS 2 due</b>
9/28	15	Exam 2	<b>Exam 2</b>
10/3	16	8	Sampling and the Central Limit Theorem
10/10	17	9	Sampling Distribution, Confidence Intervals
10/12	18	9	Confidence Intervals
10/17	19	10	Introduction to Hypothesis tests
10/19	20	10	Constructing a Test Statistic
10/24	21	10	Using the t-table
10/26	22	11	Matched Pairs and Paired Differences
10/31	23	11	Pooled, Two-Population Test Statistics
11/2	24	15	Proportions, Introduction to Chi-Square
11/7	25	15, 13	Chi-Square, Introduction to Regression
11/9	26	13	Regression Hypothesis Testing
11/14	27	13	Regression Hypothesis Testing, <b>PS3 due</b>
11/16	28	Exam 3	<b>Exam 3</b>
11/28	29	Excel	Excel demonstration
11/30	30	review	review
12/5	FINAL	<b>FINAL</b>	<b>Final Exam, 11-1 PM</b>

### Americans with Disabilities Act

Students with a documented disability may work with UWG Accessibility Services to receive essential services specific to their disability. All entitlements to accommodations are based on documentation and USG Board of Regents standards. If a student needs course adaptations or accommodations because of a disability or chronic illness, or if he/she needs to make special arrangements in case the building must be evacuated, the student should notify his/her instructor in writing and provide a copy of his/her Student Accommodations Report (SAR), which is available only from Accessibility Services. Faculty cannot offer accommodations without timely receipt of the SAR (defined as within two days of class start); further, no retroactive accommodations will be given. Accessibility Services is located in 123 Row Hall at the Student Development Center, telephone 678-839-6428, [http://www.westga.edu/studentDev/index\\_8884.php](http://www.westga.edu/studentDev/index_8884.php)

### Reading and Connect Schedule, Lind/Marchal 17th Edition

Class	Chapter	Pages	Connect Assignment
1	1	1-14	Assignment 1
2	2	18-34, 38-40	Assignment 1
3	3,4	50-67, 70-73, 76-79, 103-114	Assignment 2
4	7	215-229	Assignment 3
5	7	215-229	Assignment 3
6	13	437-447, 452-459	Assignment 4
7	13	437-447, 452-459	Assignment 4
8	exam 1	exam 1	exam 1
9	5	132-147,	Assignment 5
10	5	148-156, 162-167	Assignment 5
11	6	176-184	Assignment 6
12	6	185-193	Assignment 7
13	6	198-202	Assignment 8
14	7	211-214, 234-238	Assignment 8
15	exam 2	exam 2	exam 2
16	8	250-272	-
17	8	250-272	Assignment 9
18	9	282-288, 289-298, 308	Assignment 9
19	10	320-331	Assignment 10
20	10	332-343	Assignment 10
21	10	332-343	Assignment 11
22	10, 11	344-348, 370-372	Assignment 11
23	11	361-369, 350-360	Assignment 12
24	15	546-550	Assignment 13
25	15	556-564	Assignment 14
26	13	440-462	Assignment 15
27	13	440-462	Assignment 15
28	exam 3	exam 3	exam 3
29	review	review	review
30	review	review	review