Economics 3402
Statistics for Business I
Instructor: William J. (Joey) Smith
Richards College of Business, Room 1303
678-839-4779  wjsmith@westga.edu

Office Hours: RCOB 1303
In Person 7am – 8am T
3:20pm-8:20pm T
Email/Phone Friday 8am-12pm (noon)
Other times by appointment

Course Information: In this class you will have regular lectures in room RCOB 1308 and regular online assignments through CourseDen (D2L). Also, you need to bring a calculator to class and tests (NO CELLPHONES AS CALCULATORS!). The calculator must, at the very least allow you to raise numbers to various powers and take all kinds of roots. A statistical calculator would be preferable. I use a TI84Plus for calculator examples in class.

Course Description: In this course we study basic statistics concepts and emphasize their applications to business environments. The various topics include methods of presenting data, probability theory and distribution, central tendency and dispersion measures, hypothesis testing, and linear regression.

Prerequisites: MAT111 or MATH 1113, CISM 2201 and a 2.0 minimum GPA. You also need to have access to a computer and you must have access to the internet. RCOB lab access is available for every student in the class.

Textbook: "Practice of Statistics for Business and Economics, 3rd Edition" by Moore, McCabe, Duckworth and Alwan. You have two options. YOU MUST SELECT ONE OF THE THREE.

Option 3: Practice of Statistics for Business and Economics: (UWG Paper 3-ring binder version. I don’t have the ISBN for this option) (These are the options for the required text; however, the previous edition of the book is likely to be very similar. It’s up to you.)

Course Objectives and Learning Outcomes:
(1) Construct and interpret tabular and graphical methods of presenting qualitative and quantitative data. (LG2, LG3, LG10)
(2) Construct and interpret summary 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 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. Introduce SAS, its uses and highlight its capabilities for statistical modeling (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).

Attendance Policy: There is no grade for coming to class, but you are responsible for all material and all announcements made in class. You cannot claim as an excuse for missing an assignment or quiz being absent when the announcement was made. You also are responsible for logging into CourseDen (D2L) daily for announcements and assignments.

Grading: We will have four exams during the semester and four online assignments. Each test is worth 20%. The four tests combined are worth 80%. The exams are all multiple choice. You need to bring an 882-Escantron to each test. If you miss the first exam, you will be dropped from the course. If you miss any subsequent exam, you will have to provide a valid excuse in writing (doctor's excuse for example; however, a note from a doctor does not guarantee that you will be allowed to make up an exam). If I deem the excuse acceptable, I will decide how the work will be made up. No other alternatives will be available for missed exams. Anyone who participates in school-sponsored activities (e.g., debate competition or varsity athletics), may reschedule an exam for an EARLIER time, but must provide 7 days’ notice to do so (note: sports schedules are available in advance of the semester). No rescheduling of the final exam date. You must arrive to tests on time. You will not be allowed to start a test if someone else has already finished and left the room. Any missed exam must be made up within one calendar week or the grade will be recorded as a zero. There are no make-ups for online assignments.
There will be online quizzes assigned in CourseDen. The quizzes combine for 20% of the final grade. No make-ups will be given under any circumstances for online quizzes and deadlines will not be moved. You are responsible for completing the assignments by the deadline. All grades will be posted on CourseDen (D2L). Some quizzes will require work to be completed in Microsoft Excel. It is assumed that you have access to this software. A dropbox will be provided to upload any spreadsheets accompanying a quiz.

If you have any questions, concerns, complaints, etc. about your grade you MUST bring it to my attention within 48 of the posting date. You cannot wait until the end of the semester to argue about missing grades, or other problems (48 hours from publication date).

Grading Scale:
- A: 90% or higher
- B: 80% to 89.9999%
- C: 70% to 79.9999%
- D: 60% to 69.9999%
- F: Less than 60%

Note: an 89.9% is a B!

Academic Integrity: Academic dishonesty as described by the Honor Code (which you can find at http://www.westga.edu/undergrad/1762.htm) will not be tolerated. Any such actions will result in a score of zero on the associated assignment(s) and/or dismissal from the course with a grade of F. The following are examples of violations of the honor code in this course:

- Talking to classmates during tests.
- Looking at other students' exams.
- Texting or emailing during tests.
- Borrowing/sharing calculators during tests.
- Working in groups or getting help on online assignments.

(Although, the above are examples, this is ONLY examples and isn’t an exhaustive list of violations.)

Affirmative Action: University of West Georgia adheres to affirmative action policies to promote diversity and equal opportunity for all faculty and students.

Americans with Disabilities Act: If you are a student who is disabled as defined under the Americans with Disabilities Act and requires assistance or support services, please seek assistance through the Center for Disability Services. A CDS Counselor will coordinate those services. See http://www.westga.edu/~dserve/

Equal Opportunity: No person shall, on the grounds of race, color, sex, religion, creed, national origin, age, or disability, be excluded from employment or participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity conducted by UWG.

Disclaimer: The instructor reserves the right to change this syllabus at any time during the semester. Any changes will be announced in class and by email. The ***Preliminary*** Class Schedule outlined below is PRELIMINARY; however, every effort will be made to adhere to the schedule. Any changes will be announced and emailed to the class.

| **Preliminary*** Class Schedule: |
| --- | --- | --- |
| **Date** | **Topics to be Discussed** | **Online Assignments** |
| Week1 (Jan 7-9) | Introduction to class and to StatsPortal |  |
| 1.1. Bar, pie, Pareto, line graphs, histograms, stemplots. |  |  |
| 1.2. Describing distributions with numbers (mean, median, variance, std. deviation, quartiles). |  |  |
| Week 2 (Jan 14-16) | 1.2. Describing distributions with numbers (mean, median, variance, std. deviation, quartiles). | Quiz Due Tuesday, Jan 21 |
| 1.3. The Normal Distribution. |  |  |
| Week 3 (Jan 21 -23) | 2.1. Scatterplots |  |
| 2.2. Correlations |  |  |
| Week 4 (Jan 28-Feb 30) | 2.3. Least squares regression |  |
| Week 5 (Feb 4-6) | 3.1. Describing samples  
3.3. Towards statistical inference |
| Week 6 (Feb 11-13) | 4.1. Randomness  
4.2. Probability models |
| Week 7 (Feb 18-20) | 4.3. Random variables  
4.4. Central Limit Theorem |
| Week 7 (Feb 25-Mar 27) | 5.1. General probability rules |
| Week 8 (Mar 4-6) | 5.2. The Binomial Distributions  
5.3. The Poisson Distributions |
| Week 9 (Mar 11-13) | 2nd Exam (Thursday, Mar 6th) Ch 3-5 |
| Week 10 (Mar 18-20) | (Spring Break) |
| Week 11 (Mar 25-27) | 6.1. Estimating with confidence  
6.2. Tests of significance |
| Week 12 (Apr 1-3) | 7.1. Inference for the mean of a population  
7.2. Comparing two means |
| Week 13 (Apr 8-10) | 8.1. Inference for a single proportion  
3rd Exam (Thursday, Apr 10th) Ch 6-8 |
| Week 14 (Apr 15-17) | 10.1. Inference about the regression model  
10.2. Using the regression line  
Application of Regression and introduction to SAS as a business tool. |
| Week 15 (April 22) | Test # 4: Chapters [1 & 2 review] + 6, 7, 8 and 10 |

**Final Exam Schedule**

**Tuesday/ Thursday Class Periods**

**30 minute break between sections - 5 minute break before sections***

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