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Syllabus
ECON 307: Sections 1 & 2
Principles/Methods of Statistics – 3 credits
Fall 2019
August 29th to December 13th
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Instructor: Melissa A. Wright, Ph.D.
461 Tyler Hall
Email: mawright02@wm.edu
Office Hours: Tuesday and Thursday 3:30-4:30 PM,
9:30-10:30 AM Friday, & by appointment through Calendly at
calendly.com/melissawright_econ

Classroom: Tyler Hall 134

Lecture: Section 1 Tuesday and Thursday 9:30-10:50 AM
Section 2 Tuesday and Thursday 11:00AM-12:20 PM

Required Materials and Resources:
- Textbook: OpenIntro Statistics 4th Ed.
    - http://www.openintro.org/stat/textbook.php
- Calculator:
    - Students ARE required to bring a calculator to every lecture (phones do not count).
    - Students will receive simple calculators for exams.
- Laptop
    - Students are expected to bring their laptops to every lecture.
    - Stata is accessible to students through W&M
    - If you do not have access to a laptop, the department has one you can borrow. See me ASAP to make arrangements.
    - Students are also welcome to work with a neighbor on one laptop if necessary, though I strongly recommend working independently.
- Blackboard: https://blackboard.wm.edu
    - Students are responsible for studying the content available on Blackboard.
    - Grades post on Blackboard.
    - Class emails send through Blackboard.
    - You can opt-in to class reminders through the Blackboard Course Calendar.
- Poll Everywhere: https://www.polleverywhere.com/login
    - MUST use W&M email to log in.
    - This will be used in the course to assess comprehension and for in-class activities.
    - If a poll is part of a graded in-class exercise the final grade in Blackboard reflects the actual grade.

Optional Materials and Resources:
- Textbook: *Introductory Econometrics, A Modern Approach* by Jeffrey Wooldridge, 6th edition: pages 628-708.
  - This is the Appendix of the textbook you will likely use in ECON 308.
- Textbook: *Statistics for Business and Economics* by Newbold, Carlson, and Thorne

Prerequisites: ECON 101 and ECON 102

Course Description: In Principles/Methods of Statistics, you will learn how to collect, display, analyze, and interpret data. We will discuss how to use data and statistics to answer questions and make inferences about an uncertain world. Topics discussed will include descriptive statistics, probability, statistical inference, and regression analysis. At the end of the semester, you will be ready to complete a final project – using economics and statistics to answer a question of particular interest to you.

Student Learning Outcomes:
• Develop data and statistical literacy.
• Understand basic probability theory.
• Present statistical information in a technically complete way that is accessible to a non-technical audience.
• Estimate and interpret simple regression

This course is designed to meet the following Learning Goals:
LG1 – Information Literacy
LG2 – Quantitative Reasoning
LG3 – Critical and creative thinking

Homework: There will be ten homework assignments. Each assignment will be worth 20 points or 2% of your grade, for a total of 200 points or 20%. Homework will be posted to the Blackboard site. Students will submit an electronic copy of their assignment by 9 AM on the due date. Assignments turned in after the 9 AM will be eligible for a maximum of half credit. After 24 hours, partial credit will not be available. I encourage you to work on homework together, but you should submit your homework written in your own words, using YOUR descriptions and analytical work. (No close duplicates of another student's, even if you worked together).

For tentative due dates see the Course Schedule on the last page of this Syllabus.

For on-time assignments: Assignments that are complete and entirely correct will receive a ✓+ (20/20). Assignments that are complete with minor mistakes will receive a ✓ (16/20). Assignments that are complete with substantial errors will receive a ✓- (12/20). Assignments that are incomplete will receive a ✓- - (8/20).

Late assignments will be graded by the same criteria but only eligible for half the points: ✓+ (10/20), ✓ (8/20), ✓- (6/20), ✓- - (4/20). Assignments that are later than 24 hours are automatically 0/0.

*Hard copies are accepted as long as they are submitted directly to the instructor (not to my mailbox or under my door. Students who prefer to to receive a printed copy of their homework can email the professor. Once the request is made a hard-copy will be supplied for each homework assignment.

In-Class Exercises: Throughout the semester, there will be in-class assignments worth a total of 5% or 50 points toward your grade. I will not announce in-class exercises. Students should have their laptops and calculators in every session. Exercises may include work in Stata.

In-Class Exercises will receive a ✓+ (100%) , ✓(80%), ✓-(60%), or 0 if not completed. The criteria will be consistent with homework grading, except that partially complete assignments will not be eligible for submission or grading. Scores from exercises will be averaged at the midterm and close of the semester. Midterm grades will be 25 points multiplied by Avg. Percentage. Final Grades will be 50 points multiplied by Avg. Percentage.

Final Paper: This project will be discussed in more detail as the semester progresses, but will involve a short assignment (a topic proposal) to help you prepare for the final project. The final paper will be worth 10% of your grade or 100 points. The topic proposal will be worth 5% or 50 points towards your grade. Students will work in groups of 2-3. Students are welcome to work with students from another section.

Tentative due dates are in your Course Schedule.

Midterm Exam: The midterm exam is Thursday, October 10th. There will be a portion of the lecture devoted to reviewing on Tuesday, October 8th. The midterm exam is worth 25% or 250 points.

Final Exam: The final exam will be cumulative. Instead of the scheduled 3 hours, students will have 2 hours to complete their exams. The final exam for each section is listed below. There will be a portion of the lecture devoted to an in-class review session, Thursday, December 5th. The cumulative final exam is worth 35% or 350 points.

Section	Date	Room	Duration
1	Friday, December 13th	TBD (likely 134)	9:00-11:00 AM
2	Tuesday, December 10th	TBD (likely 134)	2:00-4:00 PM

Please review your final exam times to avoid scheduling conflicts: https://www.wm.edu/offices/registrar/calendarsandexams/examschedules/index.php

*To encourage academic progress and give students a chance to improve their midterm scores, students who score higher on their final exam will be able to replace their midterm score. For example, if a student scores 80% on their midterm and 85% on their final, they will receive an 85% for both exams. However, if a student scores 85% on their midterm and 80% on their final, their midterm exam grade will not change.

Attendance: Students are encouraged to attend and participate in class. I will occasionally take attendance at the beginning of class, but it will not count towards your grade. Attendance and exam scores are highly correlated.

Late Policy: Students are expected to be on-time and prepared for lecture. Lateness creates a disruptive atmosphere. The first lateness will not have an impact on your grade. Subsequent latenesses will result in a 10 point or 1% reduction for EACH lateness from your total grade. You must email the instructor BEFORE class with late excuses. I will excuse tardies for athletic and academic reasons.

Technology Policy: Students are welcome to use laptops or tablets through class to the extent that it doesn't distract the instructor or other students. Cell phones (on silent) may be used to take photos during lecture but are not a suitable replacement for a calculator. If you have a cell phone out during lecture, it must be visible on your desk. I reserve the right to suspend technology privileges from any student causing disruption or violating this technology policy.

Extensions/Makeups: Work cannot be submitted or accepted after the cutoff date for each assignment unless otherwise agreed upon with the instructor BEFORE the due date. I offer makeup exams at my discretion. Students are never required to submit health notes directly to instructors. For long-term health concerns, please work with the Dean of Students, though students are never discouraged from reaching out to me directly.

Classroom Disruptions: Any continued disruption of class will not be tolerated. Classroom discussion should be civilized and respectful to everyone and relevant to the topic we are discussing. Side conversations that disrupt the class, my ability to teach, or students' ability to learn will not be tolerated. I reserve the right to ask you to leave the classroom if your behavior is disrupting the class. If necessary, I will report disruptive behavior to the Office of Student Conduct.

Office Hours Policy: Office hours are a valuable resource in my course. Students are encouraged to take advantage of drop-in office hours or make appointments. Calendly is set up in 15 increments, but students can schedule 2 sessions for a total of 30 minutes. Students are also welcome to make group appointments and add classmates to the event. I am also available to address questions and concerns via email. As a rule of thumb, email first, if my reply does not address your question to your satisfaction, then schedule through Calendly.

*For homework-specific questions please use the Stata Lab.

Stata Lab: The Stata lab is in Tyler 224 from 6-9pm Sunday through Wednesday starting 9/8.

Academic Integrity: Academic integrity is at the heart of the university, and we all are responsible for upholding the ideals of honor and integrity. The student-led honor system is responsible for resolving any suspected violations of the Honor Code, and I will report all suspected instances of academic dishonesty to the honor system. The *Student Handbook* (**www.wm.edu/studenthandbook**) includes your responsibilities as a student and the full Code. I expect full participation and observance of the Honor Code. To read the Honor Code, see **www.wm.edu/honor**

Student Accessibility Services: William & Mary accommodates students with disabilities under federal laws and university policy. Any student who feels they may need an accommodation based on the impact of a learning, psychiatric, physical, or chronic health diagnosis should contact Student Accessibility Services staff at **757-221-2509** or **sas@wm.edu** to determine if accommodations are warranted and to obtain an official letter of accommodation. For more information, please see **www.wm.edu/sas**.

Students with accommodations are encouraged (not required) to speak (or email) with me directly to ensure access to every resource needed.

Important Dates and other Resources
- Add/drop deadline is September 6th
- Withdraw deadline is October 28th
- Hidden Rules For Office Hours
  https://www.wm.edu/sites/neurodiversity/documents/hidden-rules-for-office%20hours.pdf
- Tribe TutorZone
  https://www.wm.edu/offices/deanofstudents/services/academicenrichment/tutors/index.php
- This year the Economics Department has a Stata Lab available to students. It is a student-led resource where you can get help with Stata and statistical problems.

Grading:

Approximate Midterm Grade Breakdown:

Homework -- 27%, 100 points
In-Class Exercises--- 6%, 25 points
Midterm Exam -- 67%, 250 points
Total ---100%, 375 points

Three classifications are given: AC for acceptable performance (A-C level grades), an MR for marginal or D level grades, or a UN for unsatisfactory performance (F level).

Final Grade Breakdown:

Homework -- 20%, 200 points
In-Class Exercises-- 5%, 50 points
Paper Proposal---5%, 50 points
Final Paper -- 10%, 100 points
Midterm Exam --- 25%, 250 points
Final Exam --- 35%, 350 points
Total ---100%, 1000 points

Grade Determination:

A letter grade will be assigned at the end of the semester based on points accumulated in class. The grading schedule is subject to change during the semester, but will not become more difficult.

A tentative grading schedule is as follows:

> A 93-100%
> A- 90-92.99%
> B+ 87-89.99%
> B 83-86.99%
> B- 80-82.99%
> C+ 77-79.99%
> C 73-76.99%
> C- 70-72.99%
> D+ 67-69.99%
> D 60-66.99%
> F less than 60.00%

*The syllabus and course schedule are subject to change to facilitate instructional and student needs.

Course Schedule:

Week	Day	Topic	Reading	Assignment Due	Important Dates
1	Thursday, August 29, 2019	Syllabus & Expectations			
2	Tuesday, September 3, 2019	Data Basics & Sampling; Introduction to Stata	1.1-1.3		
	Thursday, September 5, 2019	Sampling & Experiments; Stata Intro Cont'd	1.4		**Add/Drop Ends Sept. 6th**
3	Tuesday, September 10, 2019	Examining Numerical & Categorical Data	2.1-2.3	HW1 9AM	
	Thursday, September 12, 2019	GIS tools for Data Visualization			
4	Tuesday, September 17, 2019	Probability	3.1-3.3	HW2 9AM	
	Thursday, September 19, 2019	Probability Cont'd; Sampling from Small Pop.			
5	Tuesday, September 24, 2019	Random Variables, Expectations	3.4	HW3 9AM	
	Thursday, September 26, 2019	Expectations; Covariance			
6	Tuesday, October 1, 2019	Continuous Distributions	3.5;4.1;4.3	HW4 9AM	
	Thursday, October 3, 2019	Normal & Binomial Distributions			
7	Tuesday, October 8, 2019			HW5 9AM	
	Thursday, October 10, 2019	Midterm Exam			
8	Tuesday, October 15, 2019	NO CLASS FALL BREAK			
	Thursday, October 17, 2019	Sampling; Confidence Intervals	5.1-5.3		
9	Tuesday, October 22, 2019	Hypothesis Testing		Paper Proposal 5 PM	
	Thursday, October 24, 2019	Inference for Categorical Data	6.1-6.4		**Last Day to Withdraw Oct. 28th**
10	Tuesday, October 29, 2019			HW6 9AM	
	Thursday, October 31, 2019	Inference for Numerical Data	7.1-7.5		
11	Tuesday, November 5, 2019				
	Thursday, November 7, 2019				
12	Tuesday, November 12, 2019	Simple Regression	8.1-8.4	HW7 9AM	
	Thursday, November 14, 2019				
13	Tuesday, November 19, 2019			HW8 9AM	
	Thursday, November 21, 2019	Multiple Regression	9.1;9.4		
14	Tuesday, November 26, 2019			HW9 9AM	
	Thursday, November 28, 2019	NO CLASS THANKSGIVING BREAK			
15	Tuesday, December 3, 2019				
	Thursday, December 5, 2019			HW10 9AM, Final Paper 5PM	
Finals	Tuesday, December 10, 2019	Section 2 Final Exam 2-4PM			
	Friday, December 13, 2019	Section 1 Final Exam 9-11AM			
	*Students are expected to read all chapter introductions that occur prior to section 1				