

# **Econ/Bus 230: Economic Statistics I**

## **University of Mississippi — Fall 2023**

### **Course Information**

Instructor: Yiyao Luo, [yluo3@olemiss.edu](mailto:yluo3@olemiss.edu)

#### Class meetings

Section 3: Tuesday and Thursday, 2:30pm-3:45pm, Lamar Room 129

Section 8: Tuesday and Thursday, 4:00pm-5:15pm, Bishop Room 101

Office Hours: Monday 11am-1pm, Wednesday 1pm-3pm, and by appointment

### **Course Description**

This course is a comprehensive introduction to statistics, including descriptive statistics and statistical graphics, probability theory, distributions, parameter estimation, hypothesis testing and simple regression. This course includes a substantial introduction to basic econometrics.

Prerequisites: Math 261/ Math 267/ Math 271

### **Course Objectives**

Upon successful completion of this course, you should be able to:

1. Summarize, interpret, and present quantitative data in mathematical forms, such as graphs, diagrams, tables, or mathematical text.
2. Develop or compute representations of data using mathematical forms or equations as models and use statistical methods to assess their validity.
3. Make and evaluate important assumptions in the estimation, modeling, and analysis of data, and recognize the limitations of the results.
4. Apply mathematical concepts, data, procedures, and solutions to make judgments and draw conclusions.
5. Synthesize and present quantitative data to others to explain findings or to provide quantitative evidence in support of a position.

### **Materials**

Textbook: OpenIntro Statistics, available at <https://www.openintro.org/book/os/>

Website: Blackboard, <https://blackboard.olemiss.edu/>

### **Course Components and Grading**

Your grade will be determined from the following components:

Participation	5%
Assignments	20%
Exam 1	20%
Exam 2	20%
Final Exam	30%
Highest Exam	5%

I will use the following grading scale, although I may curve numerical grades to higher letter grades at the end of the semester if needed.

A	[90, 100]	C+	[73, 77)
A-	[87, 90)	C	[70, 73)
B+	[83, 87)	C-	[67, 70)
B	[80, 83)	D	[60, 67)
B-	[77, 80)	F	[0, 60)

Participation: You will answer questions in class using Google Form. Your participation score is based on whether you answer these questions; there is no penalty for incorrect answers. I expect you to be in the classroom in order to answer these questions. You can fail to respond to 30 percent of the poll questions before losing points on your participation score.

Assignments: There will be approximately nine assignments, and tentative topics covered by each assignment are included on the schedule below. I will drop the lowest two assignment scores before computing your assignment average. You must first attempt each assignment on your own. After that, you may work with classmates, but you may not simply share answers.

Midterm Exams: There will be two in-class exams. The dates of these are on the schedule below.

Final Exam: The final exam details for each section are listed below. In general, you must take the exam with the section for which you are registered. If you obtain an official exam excuse, you will take the exam with the other section if possible.

Section 3: Tuesday, December 5, 4:00pm-7:00pm, Lamar Room 129

Section 8: Wednesday, December 6, 4:00pm-7:00pm, Bishop Room 101

Highest Exam: I will use the highest of your three exam scores (exam 1, exam 2, and final exam) for this component of your grade.

## Academic Policies

Attendance: It is essential to your success in this course that you attend each lecture and participate in the discussions. Therefore, you are expected to attend each lecture and show up on time. To attend class virtually (on Zoom or watch the recording) and be counted as present, you need to submit a valid excuse in advance of class that follows the absence guidelines below.

1. The university requires students to attend the first meeting of every course for which they are registered, unless they obtain prior departmental approval. Without such approval, a student who is absent from the first class meeting may be dropped from that class by the dean of the school or college with the responsibility for the course. For more details, consult this [Guidelines for Attendance Policies](#). The university also requires instructors to verify the

attendance of each student during the first two weeks of the term. You can read more about attendance verification at this [link](#).

2. You are allowed two unexcused absences, excluding the first class. After that, 1 point will be deducted from your final grade for each absence with maximum of 5 points.
3. Excused absences are as follows:
  - (a) Illness: If you are sick, you must provide a Doctor's note to qualify for an excused absence.
  - (b) Personal or family emergency: Please notify the instructor in advance. Normally you will need to submit any assignments due and make up exams, but flexibility will be provided depending on the situation.
  - (c) Out-of-town interviews: Limited to 1 approved absence and only if notify the instructor in advance along with documentation showing evidence of the out-of-town interview on the date of class. You will need to submit any assignments due and make up exams.
  - (d) Religious holiday observance.
  - (e) Varsity athletic participation.

Your attendance will be verified through the equipped scanners in the classroom during each lecture and be evaluated based on 15 lectures randomly picked after the last class.

Conduct: Please respect your fellow students by behaving professionally. This includes arriving on time, not leaving class unnecessarily, and not distracting others.

Academic Integrity: According to institutional policy, 'The University is conducted on a basis of common honesty. Dishonesty, cheating, or plagiarism, or knowingly furnishing false information to the University are regarded as particularly serious offenses.' We share a responsibility to maintain academic integrity in our work and will follow the procedures outlined in the [Academic Conduct and Discipline Policy](#) and the [M Book](#) for any instance of academic misconduct.

Late Assignments: Assignments are accepted up to 24 hours after the deadline with no penalty and are not accepted after that. I know that things like personal emergencies or computer problems may prevent you from submitting an assignment, which is why I drop the lowest two assignment scores before computing your assignment average. Exceptions to this policy will generally only be made if you accumulate a significant number of University Approved Absences.

Missed Exams: If you miss a midterm exam and you have a University Approved Absence, you can choose to make up the exam or use the average of your other exam grades on this exam. For the final exam, the university policy is that you may only take the exam outside the scheduled time if you have an approved final exam excuse, and requests must be made no later than the final day of classes. Exams missed without official approval or excuse will generally receive a reduced grade or a grade of zero.

Syllabus Changes: I reserve the right to make changes to the syllabus, including assignment due dates and exam dates. These changes will be announced as early as possible.

## **Academic Resources and Student Support**

Disability Access and Inclusion Policy: The University of Mississippi is committed to the creation of

inclusive learning environments for all students. If there are aspects of the instruction or design of this course that result in barriers to your full inclusion and participation, or to accurate assessment of your achievement, please contact the instructor as soon as possible. Barriers may include, but are not necessarily limited to, timed exams and in-class assignments, difficulty with the acquisition of lecture content, inaccessible web content, and the use of non-captioned or non-transcribed video and audio files. If you are registered with SDS, you must log in to your Rebel Access portal at [rebel-access-portal](#) to request approved accommodations. If you are NOT registered with SDS, you must complete the process to become registered. To begin that process, please visit our website at [apply-for-services](#). SDS will:

1. Complete a comprehensive review to determine your eligibility for accommodations,
2. If approved, disseminate to your instructors a Faculty Notification Letter,
3. Facilitate the removal of barriers, and
4. Ensure you have equal access to the same opportunities for success that are available to all students.

If you have questions, contact SDS at 662-915-7128 or [sds@olemiss.edu](mailto:sds@olemiss.edu).

Student Support and Advocacy: [UMatter](#) provides free and confidential information, consultation, support, and case management to University of Mississippi students and graduate students who may have experienced concerns of challenges impacting them during their time at the university. UMatter works to coordinate access to campus and community resources to support students. UMatter also provides support and resources for students that are responding to Title IX or conduct matters at the university. These services include academic and housing accommodations for Title IX concerns, individual case management for responding students, support in Title IX investigations and conduct matters, connecting students with advisors for adjudication processes, and referrals to services on campus and in the community. Contact UMatter, [umatter@olemiss.edu](mailto:umatter@olemiss.edu), 662-915-7248, 301 Student Union with questions or for support.

VIP: Survivor Support: Students who may have experienced any type of gender-based violence including sexual assault, relationship abuse, or stalking are encouraged to reach out to [VIP: Survivor Support](#) by calling 662-915-1059 or emailing [vip@olemiss.edu](mailto:vip@olemiss.edu) for confidential emotional support and resources. Students may need support with their academics, non-emergency medical care, forensic exams, STI testing, reporting options, safe rooms/safety planning, and/or referrals for psychological support. Students will receive nonjudgmental emotional support and create an individualized plan to meet their needs.

University Counseling Center: The [University Counseling Center](#) is a professional facility offered by the University of Mississippi to assist students, faculty, and staff with many types of life stressors that interrupt day-to-day functioning, including the stressors associated with the COVID-19 pandemic. They offer individual counseling, couple's counseling, group counseling, stress management, crisis intervention, assessments and referrals, outreach programs, consultations, and substance abuse services. There is no fee for currently enrolled University students and everything you say to your counselor is confidential. You can contact the Counseling Center for information about mental

health issues at [counslg@olemiss.edu](mailto:counslg@olemiss.edu), 662-915-3784, 220 Lester Hall. You can schedule an appointment or get information about appointments by calling the UCC at 662-915-3784.

### Schedule of Topics and Assignments

Week	Dates	Tuesday	Thursday	Assignments
1	Aug 21-25	Summarizing data-distributions	Summarizing data-distributions	A1
2	Aug 28-Sep 1	Summarizing data-relationships	Producing data	
3	Sep 4-8	Probability	Probability	A2
4	Sep 11-15	Discrete random variables	Discrete random variables	A3
5	Sep 18-22	Continuous random variables	Continuous random variables	
6	Sep 25-29	Joint and conditional distributions	Joint and conditional distributions	A4
7	Oct 2-6	Review session	Exam 1	
8	Oct 9-13	Point estimates and sampling distributions	Point estimates and sampling distributions	A5
9	Oct 16-20	Confidence intervals	Confidence intervals	A6
10	Oct 23-27	Hypothesis tests for mean	Hypothesis tests for mean	A7
11	Oct 30-Nov 3	Hypothesis tests for difference	Hypothesis tests for goodness of fit	A8
12	Nov 6-10	Review session	Exam 2	
13	Nov 13-17	Simple regression	Simple regression	
14	Nov 20-24	No class: Thanksgiving	No class: Thanksgiving	A9
15	Nov 27-Dec 1	Simple regression	Review session	