

ABM 2225/ ECONOM 2004: Statistical Analysis

Fall, 2020

Syllabus

Instructor: Alina Malkova
Email: amalkova@missouri.edu
Website: <https://courses.missouri.edu/>
Office hours: by appointment in Zoom: Tue & Thu 4:00pm – 5:00pm
Classroom: WATERS HALL 117 (Waters Aud)
Time: TuTh 12:30PM - 1:45PM
Materials: Groebner, Shannon, Fry, and Smith: Business Statistics: A Decision-Making Approach, 10th ed.
Intercooled Stata (Version 12 or later)

Course Description: The purpose of this course is to explore the foundations of Economic Statistics and Econometrics, focusing on statistical techniques, application of statistical and probabilistic methods to real-world situations, and data analysis.

The course covers five general topics:

1. Descriptive statistics
2. Random variables
3. Sampling distributions
4. Hypothesis testing
5. Regression analysis

Textbook: The recommended textbook is *Business Statistics: A Decision-Making Approach* by Groebner, Shannon, Fry, and Smith. But you might find additional or alternative textbooks helpful in their treatment of the subject matter and the availability of extra problems.

Assignments: There will be two kinds of Homework assignments: Problem Sets and Stata Assignments. Problem Sets (PS) and Stata Assignments (SA) would be posted on Canvas and must be turned in on Canvas by midnight on the due date. There will be a total of eight assignments (4 PS and 4 SA). Only the highest three of each will count towards your final grade (6 total). Feel free to consult each other on homework assignments, but each person is responsible for submitting their own unique assignment. In order to get your homework graded efficiently, your homework should be submitted on time and in order and written clearly with pages attached. Homework turned in within a day after the due date will receive 75% of credit. No homework will be accepted more than a day late without a valid excuse.

In-class quizzes: “In-class quizzes” will be conducted during each class using iClicker. Participation requires that you have access to a smartphone, laptop or remote control. In-class quizzes are to be done in class, and it is a violation of the honor code to answer elsewhere.

Exams: There will be three exams (two midterms and a Final). Refer to Grading for the dates of the exams. If you have to miss a midterm there is no way to make up that exam. Instead, the grade in the Final will also count for the missed midterm. The final exam is cumulative; however greater emphasis will be placed on later topics. The final exam is obligatory (University policy).

Grading: Your grade is based on two exams, quizzes and the eight valid homework assignments:

In-class quizzes (5%)
 Homework assignments (25%)
 Midterm (15%): Tuesday, Oct 6
 Midterm (15%): Thursday, Oct 29
 Final exam (40%): December 16 (7:30 am-9:30 am)

Class Attendance: Most classes will incorporate small group work via Slack (invite link: https://join.slack.com/t/abm2004econom2225/shared_invite/zt-gmmj65g4-DpPaBU5JqjkugP~TmyQ6_g). These activities will require students to work together to solve problems or answer questions. Participation in-class activities is highly encouraged. Regular attendance and participation is strongly recommended. You are responsible for any notes or class announcements that you may have missed. You should attempt to get these notes/announcements from one of your peers before seeing me. It is expected that you will respect your peers and the instructor with appropriate behavior while in class and that you will arrive to class on time. You should refrain from browsing the web, texting, etc. during class time.

Class Schedule (preliminary):

Date	Subject	Chapters	Homeworks
Aug 25	Intro/ Describing Data	1-2	
Aug 27	Describing Data	2-3	
Sep 1	Practicum on Probability Theory	3	SA1
Sep 3	Discrete Prob. Distributions	5/4	
Sep 8	Discrete Prob. Distributions	5	
Sep 10	Continuous Distributions	6	PS1
Sep 15	Continuous Distributions	6	
Sep 17	Sampling Distributions	7	SA2
Sep 22	Sampling Distributions	7	
Sep 24	Estimating Means & Proportions	8	
Sep 29	Estimating Means & Proportions	8	PS2
Oct 1	In-class activities		
Oct 6	Exam I (Covers chapters 1-3, 5-8)		
Oct 8	Testing Hypotheses	9	SA3

Oct 13	Testing Hypotheses	9	
Oct 15	Testing Hypotheses	10	
Oct 20	Testing Hypotheses	10-11	PS3
Oct 22	Testing Hypotheses	10-11	
Oct 27	Linear Regression	14	
Oct 29	Linear Regression	14	
Nov 3	Linear Regression	14	
Nov 5	In-class activities		
Nov 10	Exam II (Covers chapters 9-11, 14)		
Nov 12	Linear Regression	14	
Nov 17	Linear Regression	14	SA4
Nov 19	Multiple Regression	15	
Dec 1	Multiple Regression	15	
Dec 3	Multiple Regression	15	PS4
Dec 8	Topics in Multiple Regression		
Dec 10	In-class activities		
Dec 16, 7:30-9:30 am	Final (Covers chapters 1-3, 5-11, 14, 15)		

Decreasing the Risk of COVID-19 in Classrooms and Labs

MU cares about the health and safety of its students, faculty, and staff. To provide safe, high-quality education amid COVID-19, we will follow several specific campus policies in accordance with the advice of the Center for Disease Control and Boone County health authorities. This statement will be updated as information changes.

- **If you are experiencing any COVID-related symptoms**, or are otherwise feeling unwell, do not attend in-person classes and contact your health care provider and/or student health immediately. COVID symptoms include: fever greater than 100.4 or chills; cough, shortness of breath or difficulty breathing; fatigue; unexplained muscle or body aches; headache; new loss of taste or smell; sore throat; congestion or runny nose; nausea or vomiting; diarrhea.

- **If you cannot attend the class due to health problems, please send me an email and attend online lectures in Zoom.** The link: <https://umsystem.zoom.us/j/98241184142>. Zoom meetings are scheduled for 12:15 pm – 2:00 pm, so you can connect earlier or stay longer to chat with the instructor and classmates.
- We will all wear **face coverings while in the classroom**, unless you have a documented exemption due to a disability or medical condition.
- We will maintain a **6-foot distance from each other at all times** (except in specific lab/studio courses with other specific guidelines for social distancing).
- We will enter the classroom and **fill the room starting at the front, filing all the way across a row**. When class ends, we will exit the row nearest to the door first; the instructor or TA will give the signal for the next row to exit, in the same manner.
- In any small section or lab class that requires them, **additional measures will be listed in the syllabus and be mandatory for class participation.**
- Online office hours will be available for all students.

This course will be recorded for the sole purpose of sharing the recording with students who can't attend class. The instructor will take care not to disclose personally identifiable information from the student education records during the recorded lesson.

Compliance with these guidelines is required for all; anyone who fails to comply will be subject to the [accountability process](#), as stated in the University's [Collected Rules and Regulations](#), Chapter 200 Student Code of Conduct.

If an instructor has concerns about how a student is following COVID-19 policies and protocols, please report those concerns to the Office of the Dean of Students. You can fill out a COVID Safety Measures Reporting Form here: https://cm.maxient.com/reportingform.php?UnivofMissouriSystem&layout_id=38

By taking the above measures, we are supporting your health and that of the whole Mizzou community. Thank you in advance for joining me and your peers in adhering to these safety measures.

Academic Integrity

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

Accommodation of Disabilities

Students with Disabilities:

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible.

If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please establish an accommodation plan with the [MU Disability Center](#), S5 Memorial

Union, 573-882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for persons with disabilities, click on “Disability Resources” on the MU homepage.

Intellectual Pluralism

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the departmental chair or divisional director; the director of the [Office of Students Rights and Responsibilities](#); the [MU Equity Office](#), or equity@missouri.edu.

All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

Academic Inquiry, Course Discussion, and Privacy

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of [section 200.020](#) of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

Title IX

University of Missouri policies prohibit discrimination on the basis of race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, pregnancy, age, disability and protected veteran status. Discrimination includes any form of unequal treatment such as denial of opportunities, harassment, and violence. Sex-based violence includes rape, sexual assault, unwanted touching, stalking, dating/interpersonal violence, and sexual exploitation.

If you experience discrimination, you are encouraged (but not required) to report the incident to the MU Office for Civil Rights & Title IX. Learn more about your rights and options at civilrights.missouri.edu or call 573-882-3880. You also may make an anonymous report online.

Students may also contact the Relationship and Sexual Violence Prevention (RSVP) Center, a confidential resource, for advocacy and other support related to rape or power-based personal violence at rsvp@missouri.edu or 573-882-6638, or go to rsvp.missouri.edu.

Both the [Office for Civil Rights & Title IX](#) and the [RSVP Center](#) can provide assistance to students who need help with academics, housing, or other issues.

Mental Health

The University of Missouri is committed to supporting student well-being through an integrated network of care, with a wide range of services to help students succeed. The MU Counseling Center offers

professional mental health care, and can help you find the best approach to treatment based on your needs. Call to make an appointment at 573-882-6601. Any student in crisis may call or go to the MU Counseling Center between 8:00 – 5:00 M-F. After hours phone support is available at 573-882-6601.

Visit our website at <https://wellbeing.missouri.edu> to take an online mental health screening, find out about workshops and resources that can help you thrive, or learn how to support a friend. Download Sanvello, a phone app that teaches skills and strategies to help you maintain good mental health. Log in with your Mizzou e-mail to unlock all the tools available through Sanvello at no cost to you.