



Economics

COLLEGE OF LIBERAL ARTS & SCIENCES

ECON 491

Course Syllabus

Data Analysis for Problem Solving

Credits: 3 undergraduate hours, or 4 graduate hours

Semester: Spring 2026

Meeting Times: Mondays and Wednesdays 11 am-12:20 pm

Instructor: Daniela Alonso Fontes

Email: dafontes@illinois.edu

Office Hours: By appointment

Course Description

Students will work in groups. Each group will choose a different dataset and its related problem to work with. Classes will alternate discussions about each step of the work and computer lab work. If the activity of the day is not finished during class time, some work might have to be completed at home before the next lab class. Partial work is going to be delivered and is part of the final grade. The focus will be on the process, not just the results. Additionally, presentation skills will be practiced (graded as participation) to prepare for the final presentation.

Prerequisites

To enroll in this course, students should have completed Econ 203 (or an equivalent course) and have prior knowledge of R or Python (students are expected to be familiar with a programming language).

Learning Outcomes

- Organize a data set.
- Analyze data.
- Understand outliers.
- Identify the appropriate model.
- Develop the model.
- Find results/solve the problem.
- Prepare a report.
- Prepare a presentation.
- Present the final work.

Learning Resources

The course will be administered through Canvas (learn.illinois.edu). All necessary materials for the course will be posted there, and it will be the primary means of communication with the instructor.

Important Dates:

Partial delivery due dates are flexible and can be changed based on work progress. The Final Report delivery date is April 26th, 2026. The Final Presentation slides delivery date is May 3rd, 2026. Final Presentations will be held on May 4th, and May 6th, 2026.

Student Assessment

For students taking the course for 3 credits, grades will be 25% for partial deliveries, 25% for class participation (contributing to discussions during classes, quizzes, and presentation of partial work), 25% for a standard final report, and 25% for presentation.

For students taking the course for 4 credits, grades will be allocated as follows: 15% for partial deliveries, 15% for class participation, 10% for the standard final report, 20% for presentation, and 40% for the long final report (essay format).

Grading:

This class uses a plus/minus grading system. Letter grades will be assigned only at the end of the semester based on the overall score. There is no curve in this class.

Plus/Minus Grade Cutoffs:

A+ \geq 97	90 > B+ \geq 87	80 > C+ \geq 77	70 > D+ \geq 67	60 > F
97 > A \geq 93	87 > B \geq 83	77 > C \geq 73	67 > D \geq 63	
93 > A- \geq 90	83 > B- \geq 80	73 > C- \geq 70	63 > D- \geq 60	

Course Policies

Partial Deliveries Policy:

The lowest score for partial deliveries will be dropped when calculating the average for the Partial Deliveries score. Late deliveries receive no credit at all. Partial deliveries must be submitted by 11:00 pm on their due dates. No exceptions will be made for technological problems. Start the uploading process with enough time before the deadline to accommodate potential issues.

Participation Policy:

Answering a quiz, presenting work in front of the class, and contributing to the discussion give the total score, regardless of whether the answer is right or wrong. Only participation matters. Attendance is also part of this grade.

Standard Final Report Policy:

Each student must deliver their report, which must be completed individually. Reports must be submitted by 11:00 pm on their due dates. No exceptions will be made for technological problems. Start the uploading process with enough time before the deadline to accommodate potential issues. Late assignments receive no credit without an instructor-approved excuse. Acceptable excuses include physical and mental illness, and personal or family emergencies. A written request for an extension must be submitted in advance.

Long Final Report Policy:

Each student must deliver their report, which must be completed individually. Reports must be submitted by 11:00 pm on their due dates. No exceptions will be made for technological problems. Start the uploading process with enough time before the deadline to accommodate potential issues. Late assignments receive no credit without an instructor-approved excuse. Acceptable excuses include physical and mental illness, and personal or family emergencies. A written request for an extension must be submitted in advance.

Academic Assistance

Students are encouraged to utilize the many resources we have throughout campus to assist with academics. We recommend that you seek them out starting early in the semester, not just in times of academic need, in order to develop good study habits and submit work which represents your full academic potential. Many resources are found on the Economics Website including details about the Economics Tutoring Center, Academic Advising, and other academic support options: <https://economics.illinois.edu/academics/undergraduate-program/academic-student-support>

Academic Integrity

According to the Student Code, 'It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions.' Please know that it is my responsibility as an instructor to uphold the academic integrity policy of the University, which can be found here: <https://studentcode.illinois.edu/article1/part4/1-401/>

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policies. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity. **Read the full Student Code at** <https://studentcode.illinois.edu/>

Students with Disabilities

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak St., Champaign, call 333-4603 (V/TTY), or e-mail a message to disability@illinois.edu. DRES Website: www.disability.illinois.edu/

Community of Care

As members of the Illinois community, we each have a responsibility to express care and concern for one another. If you come across a classmate whose behavior concerns you, whether in regards to their well-being or yours, we encourage you to refer this behavior to the Student Assistance Center (217-333-0050 or <http://odos.illinois.edu/community-of-care/referral/>). Based on your report, the staff in the Student Assistance Center reaches out to students to make sure they have the support they need to be healthy and safe. Further, we understand the impact that struggles with mental health can have on your experience at Illinois. Significant stress, strained relationships, anxiety, excessive worry, alcohol/drug problems, a loss of motivation, or problems with eating and/or sleeping can all interfere with optimal academic performance. We encourage all students to reach out to talk with someone, and we want to make sure you are aware that you can access mental health support at the Counseling Center (<https://counselingcenter.illinois.edu/>) or McKinley Health Center (<https://mckinley.illinois.edu/>).

For mental health emergencies, you can call 911 or walk into the Counseling Center, no appointment needed.

Disruptive Behavior

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office for Student Conflict Resolution for disciplinary action.

Emergency Response Recommendations

Emergency response recommendations can be found at the following website: <http://police.illinois.edu/emergency-preparedness/>. I encourage you to review this website and the campus building floor plans website within the first 10 days of class. <http://police.illinois.edu/emergency-preparedness/building-emergency-actionplans/>.

Religious Observances

The Religious Observance Accommodation Request form is available at <https://odos.illinois.edu/community-of-care/resources/students/religious-observances/>. Submit the form to the instructor and to the Office of the Dean of Students (helpdean@illinois.edu) **by the end of the second week of the course**; in the case of exams or assignments scheduled after this period, students should submit the form to the instructor and to the Office of the Dean of Students as soon as possible.

Family Educational Rights and Privacy Act (FERPA)

Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self- identify to the instructor to ensure protection of the privacy of their attendance in this course. See <http://registrar.illinois.edu/ferpa> for more information on FERPA. Student information and records will not be released to anyone other than the student unless the student has provided written approval or as required by law.

Sexual Misconduct Reporting Obligation

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: <http://www.wecare.illinois.edu/resources/students/#confidential>.

Other information about resources and reporting is available here: <http://wecare.illinois.edu/>.

Student Support

The Counseling Center is committed to providing a range of services intended to help students develop improved coping skills in order to address emotional, interpersonal, and academic concerns. Please visit their website to find valuable resources and services: <https://counselingcenter.illinois.edu/>.

Counseling Center Information: 217-333-3704

Location: Room 206, Student Services Building (610 East John Street, Champaign IL)

McKinley Mental Health Information: 217-333-2705

Location: 3rd Floor McKinley Health Center 1109 South Lincoln, Urbana, IL

Emergency Dean: The Emergency Dean may be reached at (217) 333-0050 and supports students who are experiencing an emergency situation after 5 pm, in which an immediate University response is needed and which cannot wait until the next business day. The Emergency Dean is not a substitute for trained emergency personnel such as 911, Police or Fire. If you are experiencing a life threatening emergency, call 911. Please review the Emergency Dean procedures: <http://odos.illinois.edu/emergency/>

Academic Dates and Deadlines

Students should make note of important academic deadlines for making changes to their courses (add, drop, credit/no-credit, grade replacement, etc.). <https://registrar.illinois.edu/academic-calendars>

Please check with your academic department regarding specific procedures and policies.