



Booth School of Business
Econometrics
ECON 52-451, 48 contact hours, 3 credit hours
5-Week Summer Session

Instructor: TBA
Email: TBA
Office Hours: TBA

Prerequisites: ECON 150 & 151 (Principles of Microeconomics and of Macroeconomics) or equivalent.

Textbook and supplementary materials:

The official textbook is:

- *Introductory Econometrics: A Modern Approach* by Jeffrey M. Wooldridge (Hereafter W), 7th edition, Cengage Learning, 2020.

Statistical Software: Stata

In this course, we use Stata to perform statistical tests and regressions. You will need access to it to complete assignments, exams, and the final project. Students can purchase STATA on their own. For the purpose of this course, purchasing a 6-month license of STATA/IC is sufficient. However, you are free to choose whichever version you would like to use. For information on STATA student discounts, please visit <https://www.stata.com/order/new/edu/gradplans/student-pricing/>.

Course Description: This course focuses on building the foundation of econometrics, ensuring students can perform statistical analyses using statistical software when data are given. Using economic theory, we interpret the results and make inferences about the estimates. Topics covered in the course may contain the following: analysis of linear regression, non-linear regression and computer simulation models. The problems of parameter estimation, verification and the prediction of economic magnitudes are also studied.

| Student Learning Outcomes | Assessment Methods |
|---|---|
| Upon completion of this course, the student should have increased his/her proficiency in the following University competencies via the specified course outcomes: | |
| Students will be able to perform multivariate regressions. Students will also be able to interpret the regression results using economic theory. | Lectures, Videos, Worksheets, Exams, Extra Readings |
| Students will be able to perform statistical tests and regressions using software Stata. | Lectures, Videos, Worksheets, Exams, Extra Readings |
| Students will be able to make predictions based on the regression outputs. | Lectures, Videos, Worksheets, Exams, Extra Readings |
| Students will be able to differentiate among cross-sectional data, time-series data, and panel data. | Lectures, Videos, Worksheets, Exams, Extra Readings |
| Students will be able to see how a research project is structured and how to carry out such a project. | Lectures, Videos, Worksheets, Exams, Extra Readings |

Lectures, assignments, exams, and final project. Lecture videos or extra readings may be provided in lieu of lectures if necessary. See the next section for the course requirements.

Graded course requirements and grading scale:

| Graded Items | Points Available |
|---------------|------------------|
| Assignments | 100 |
| Exam 1 | 100 |
| Exam 2 | 100 |
| Final Project | 100 |
| Total | 400 |

Letter grades will be assigned using the following scale:

| Letter Grade | Score (in terms of points) | Score (in terms of percentages) |
|--------------|----------------------------|---------------------------------|
| A | 360 or above | 90% or above |
| B | 320-359.99 | 80%-89.99% |
| C | 280-319.99 | 70%-79.99% |
| D | 240-279.99 | 60%-69.99% |
| F | Below 240 | 60% or below |

Assignments

There are five assignments in this course, and each count for 20 points. Assignments will be posted online. The due dates are to be announced in class. Students will have at least a week to complete the assignment. You are encouraged to work in groups, but each student should turn in his or her own copy. Each assignment should be typed and be submitted via Canvas. All types of questions are possible on assignments: multiple choice, fill in the blanks, short answers, etc. It is important that you comply with all the instructions as outlined. We may or may not have time in class to cover every single question from every single worksheet. It is your responsibility to check the answer key, which will be posted after it is due.

Exams

Throughout the semester there are going to be two (2) exams.

There will be no makeup exams except for university approved activities, death in immediate family, illness, or military/jury duty. Notice must be given to the instructor prior to your absence and documentation is required to make up the exam. For example, letters from a coach, doctor, or obituary is necessary to make up the exam. Failure to give such notice will result in a zero (0) for that exam. It is up to the instructor's discretion for makeup exams. No early exams will be given. Any other electronic devices and paper dictionaries are not allowed for use during the exam. There are also no hats of any kind or headphones allowed during any exam. Cheating will not be tolerated and will result in an F for the course and a charge of academic dishonesty. All parties involved will be charged with academic dishonesty.

Note that if the instructor deems it necessary or appropriate, in-class exams may be replaced by take-home exams. In the event of take-home exams, students are free to consult any notes or books. However, students may not communicate with each other on the exam material. Students may only ask the instructor for clarifications on the exam material.

Final Project

The final project accounts for 100 point. It involves using data and perform descriptive statistics, regressions, and statistical tests learned in the class. A final presentation is required, which is to be held towards the end of the course. More details can be found on Canvas.

Tentative 5-week Schedule

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| Week 1 | Math Refresher A: Basic Mathematical Tools. Math Refresher B: Fundamentals of Probability. Math Refresher C: Fundamentals of Mathematical Statistics. 1. The Nature of Econometrics and Economic Data. (1-1~1-4) 2. The Simple Regression Model. (2-1~2-7) 3. Multiple Regression Analysis: Estimation. (3-1~3-7) |
| Week 2 | Assignment 1 Exam 1 4. Multiple Regression Analysis: Inference. (4-1~4-7) 6. Multiple Regression Analysis: Further Issues. (6-1~6-4) |
| Week 3 | Assignment 2 7. Multiple Regression Analysis with Qualitative Information. (7-1~7-6) Exam 2 19. Carrying Out an Empirical Project. |
| Week 4 | 8. Heteroskedasticity. (8-1, 8-2, 8-3) Assignment 3 9. More on Specification and Data Problems. (9-1, 9-2, 9-4, 9-5) |

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| Week 5 | 10. Basic Regression Analysis with Time Series Data. (10-4, 10-5) Assignment 4 Exam 3 |
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Relevant University Policies:

Attendance: Students are expected to attend all classes as specified in the course syllabi for each course. It is the responsibility of the student to promptly notify his or her instructor when unable to attend class. Please refer to the university policy on attendance at <https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

Final exams: If an emergency occurs that prevents the administration of a course scheduled final examination, the final course grades will be calculated based on the work in the course completed to that point in time and the faculty member’s considered judgment. Final exams will not be rescheduled, and a grade of “I” will not be given as a result of an institutional cancellation of a final examination. This final exam policy does not apply to online courses.

Administrative drop: An instructor may request the Office of the Registrar delete a student from a course roster if the student has not met the prerequisite for the course as stated in the catalog, or as a result of non-attendance in the course.

Email Communication

Students are required to use their Northwest student email account for any correspondence within the university and for this class. Should an occasion arise in which you need to contact me, email is the best alternative. Please make sure your writing is clear, understandable, and polite and that you always include a salutation and “signature”. All of this is good business practice. When you email me, use the word "Online" in the subject. I will respond to all emails within 24 hours of receiving them. I will check my email daily. However, I do not have notifications on my phone for when emails are received. Please visit this link for netiquette expectations:

<http://www.albion.com/netiquette/corerules.html>.

Students are also greatly encouraged to check their email, CATPAWS, and Northwest Online accounts on a regular basis.

Code of Academic Integrity

The students, faculty, and staff at Northwest endeavor to sustain an environment that values honesty in academic work, that acknowledges the authorized aid provided by and intellectual contributions of others, and that enables equitable student evaluation.

Sustaining academic integrity at Northwest is the responsibility of the entire university community. The value of the educational experience, the reputation of Northwest’s courses of study and degrees, and the university’s mission of ensuring student success—each of

these depends on diffuse academic integrity.

Students bear the responsibility of performing with academic integrity in all academic situations.

Students should be especially attentive to academic integrity whenever submitting academic work for evaluation, honors, or publication. Students are responsible for understanding the eight areas of academic behavior which violate the Code of Academic Integrity: (1) knowingly obtaining unauthorized aid or information; (2) knowingly giving unauthorized aid or information;

(3) committing plagiarism from written, electronic, or internet sources; (4) misrepresenting facts or data; (5) offering bribes; (6) using library resources unethically; (7) using computer resources unethically; and (8) knowingly assisting in any of the above practices.

Any student who violates the Code of Academic Integrity may receive a course-level sanction, such as failure of the course, and review by the Academic Integrity Panel at Northwest, which may recommend administrative sanctions, including dismissal from the university.

Special Accommodations Statement

Northwest Missouri State University complies with Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990.

If a student has a disability that qualifies under the ADA and requires accommodations, he/she/they should contact the accessibility office for information on appropriate policies and procedures. Disabilities covered by the ADA may include learning, psychiatric, physical disabilities, or chronic health disorders.

Students requiring special classroom accommodations should meet with me during office hours so that we can discuss how to meet your needs this semester. Prior to our meeting be sure you have met with Pat Wyatt in the **Accessibility Services Office** in OL 242 on the 2nd floor of Owens Library. You can also contact the office at 660.562.1639, or email at pjp@nwmissouri.edu or ADA@nwmissouri.edu. If you have been approved for an accommodation, if you have emergency medical information to share with me, or if you need special arrangements, please inform me immediately.

Non-Discrimination Statement

Northwest Missouri State University (the "University") is committed to maintaining an environment for all faculty, staff, students, and third parties that is free of illegal

discrimination and harassment. In keeping with that policy, the University prohibits discrimination and harassment by or against any faculty, staff member, student, applicant for admissions or employment, customer, third-party supplier or any other person (collectively the “University Community”) because of their race, color, religion, national origin, sex, sexual orientation, gender identity, pregnancy, ancestry, age, disability, genetic information, veteran status, or any other legally-protected class (collectively “protected statuses”).

Family Educational Rights and Privacy Act (FERPA)

Please refer to the following link to view Northwest Missouri State University’s policy for Family Educational Rights and Privacy Act (FERPA):

<http://www.nwmissouri.edu/policies/academics/Family-Educational-Rights-and-Privacy-Act.pdf>

Technical Support

For technical support, please email helpdesk@nwmissouri.edu or use the question mark icon in the bottom left portion of the page once inside our course site. Additional information is available by visiting: <http://www.nwmissouri.edu/academics/ltc/migration/new-northwest-online-support.htm> or <http://www.nwmissouri.edu/online/support.htm>.