

Seattle University
Albers School of Business and Economics
Economics 4110 | Applied Econometrics
Fall 2020 | Tuesday & Thursday 10:15-12:20 | [ZOOM](#)

As the pandemic continues to disrupt our collective experiences on campus, I will seek to foster our intellectual growth and social connection through synchronous delivery of most course content and complementary asynchronous materials, discussions, and practice problems.

Adapted from <https://www.chronicle.com/article/Nobody-Signed-Up-for/248298>.

Instructor

Bridget Hiedemann | Professor | Department of Economics

Virtual Office Hours: [Monday & Friday 1:00-2:00 p.m. most weeks](#) | [Monday & Friday 8:00-9:00 a.m. September 14 & 18](#)

Office hours provide a chance for you to meet with me one-on-one or in small groups to discuss course content or assignments. I will hold office hours via Zoom, provided we have the bandwidth; otherwise, we can communicate via phone. You can access my office hours from the links above or from the Zoom section of Canvas. I set up a waiting room to ensure that you receive my full attention during your time slot and to maintain your privacy.

If you have a question that I can address over email or if you would like to schedule an appointment outside of regularly scheduled office hours, please send me a message through Canvas.

Rationale for the Course

Integrating economics, statistics, and mathematics, econometrics involves estimating economic relationships, confronting theory with empirical evidence, and testing hypotheses. Success in economics as well as a variety of other social science and business fields requires the application of econometric methods, the interpretation of econometric results, and an understanding of the limitations of these methods.

Learning Outcomes

This course will enhance your ability to:

1. use Excel and R to work with real-world data
2. develop and estimate econometric models
3. understand and assess underlying assumptions
4. interpret findings
5. communicate findings to technical and non-technical audiences
6. recognize limitations of econometric models, methods, and findings

Prerequisites

Success in this course requires familiarity with algebra, calculus, statistics, and Excel. Specific prerequisites include ECON 2100, ECON 3100, and MATH 1130/1334 or their equivalents.

Readings

Wooldridge, Jeffrey M., *Introductory Econometrics*, Mason, OH: Thomson (5th, 6th, or 7th edition).

I will post links to assigned journal and newspaper articles in the relevant Canvas modules.

Attendance

As in a face-to-face course, I expect you to attend each class session. However, I understand that emergencies and other unexpected circumstances occasionally prevent students from attending class. In this case, please let me know so that we can arrange for you to catch up on missed material.

Assignments and Exams

While readings, problem sets, discussions, and exams relate to learning objectives 3-6, the projects relate to all six learning objectives.

Assigned readings include textbook chapters, journal articles, and newspaper articles.

Though ungraded, please do not treat problem sets as optional. These assignments will help you master important concepts that are critical for success on the exams and projects.

The course includes numerous opportunities for participation. In addition to discussions of journal and magazine articles, problem sets, and course projects during our time together on Zoom and between class sessions on Canvas, I welcome your questions and insights during our Zoom sessions.

The course includes a midterm and a comprehensive final exam. I cannot reschedule an exam unless there is an emergency or other compelling reason. If you think you need to reschedule an exam, you need to let me know ahead of time.

The course includes two group projects involving an econometric analysis of real economic data. The first project concerns labor market earnings, while the second concerns mortgage approvals. These projects have multiple components. Please submit your work on time. Along with the submission of the final paper for each project, your group will provide a summary of each individual's contributions to the projects. At the end of the quarter, you will each submit a confidential peer review evaluating the contributions of your group members.

Please check your email regularly in case there are announcements related to assignments.

Grading

Midterm and Final Exams	45%
Group Projects	
Overall Quality	40%
Quality of Individual Contributions	10%
In-Class and Online Participation	5%

The grading scale for this course is as follows:

A	94%
A-	88%
B+	84%
B	80%
B-	76%
C+	72%
C	68%
C-	64%

Each exam will include six questions/problems with multiple parts. You may answer any five of the six questions.

See Canvas for a detailed grading rubric for the group projects.

Your class participation grade depends on your engagement in our Zoom sessions as well as the quality of your contributions to Zoom and Canvas discussions. A student who regularly provides thoughtful questions and insights in Zoom discussions and contributes to almost all assigned Canvas discussions can earn the maximum possible participation points. A quiet but engaged and prepared student who contributes to small group discussions over Zoom and provides thoughtful posts in Canvas discussions can also earn the maximum possible participation points.

Course Outline

Introduction to Econometrics: Chapter 1

Simple Linear Regression: Chapter 2

Multiple Regression: Chapters 3, 4, and 7

Nonlinear Models: Chapters 2, 3, 4, 6, and 7

Heteroskedasticity: Chapter 8

Limited Dependent Variable Models: Chapters 7 (section 5) and 17 (sections 1 and 2)

Instructional Methods

This course includes a mix of synchronous and asynchronous learning. The synchronous learning will take place over Zoom during the regularly scheduled class times. See Canvas for links to Zoom sessions. Our time together will include interactive lectures, practice problems, practice with R, and discussions. At times, we will all be together; other times, we will use breakout rooms. Canvas includes a separate module for each Zoom session.

The asynchronous components include assigned readings, problem sets, and/or course projects – essentially any work that you would normally complete outside of a face-to-face class – as well as other materials that substitute for face-to-face class time such as videos or Canvas discussions.

Canvas alternates between asynchronous and synchronous modules. Please complete each asynchronous module prior to our Zoom sessions.

Tentative Deadlines and Exam Schedule (Seattle Time)

Labor Market Analysis

Sunday, September 13 | End of Day (EOD)

Review of Questionnaire; Research Questions; Selected State; Proposed Division of Labor

Sunday, September 20 | EOD

Exploratory Data Analysis and Sample Selection Criteria

Sunday, September 27 | EOD

Descriptive Statistics; Draft of Introduction; Draft of Data Section

Sunday, October 4 | EOD

Preliminary Econometric Estimates; Draft of Econometric Model and Estimation Methods Section

Sunday, October 11 | EOD

Revised Econometric Estimates; Professional Results Table; Group Discussion about Findings; Draft of Results Section

Tuesday, October 20 | Start of Class

Final Paper; Summary of Contributions; Elevator Pitch

Mortgage Lending Decisions

Sunday, October 25 | EOD

Exploratory Data Analysis; Sample Selection Criteria; Descriptive Statistics by Race and Ethnicity

Sunday, November 1 | EOD

Logit and Probit Estimates; Odds Ratios

Sunday, November 8 | EOD

Predicted Probabilities

Thursday, November 12 | EOD

Final Results Tables (Probit and Logit Estimates; Odds Ratios; Predicted Probabilities)

Sunday, November 15 | EOD

Final Paper; Summary of Contributions; Peer Reviews

Tuesday, November 17 | Start of Class

Class Discussion

Exams

Thursday, October 15 | 10:15 a.m.

Midterm

Monday, November 23 | 10:00 a.m.

Final Exam

Class Norms and Etiquette

As members of a shared community of learning, we will be present for one another through visible and vocal participation. To participate in class discussions, you will need sound.

Showing your face in meetings helps build community, enables greater communication, and demonstrates professional courtesy, so please turn the video on during our Zoom sessions. You are welcome to use a virtual background if you have the bandwidth to do so.

Of course, any one of us can suffer an occasional technology failure, but we make apologies and have a plan for fixing it before the next meeting. If possible, please prepare a backup technology plan for the midterm and final. Please raise any individual concerns with me as soon as possible.

Webcams and microphones are often sold as a single piece of equipment and start around \$30. The University is lending laptops with webcams and mics, as well as internet hotspots, to qualifying students free of charge (<https://www.seattleu.edu/library/>). Another alternative is to join Zoom with one device (e.g., desktop) to hear the session audio, and then join Zoom with another device (e.g., a smartphone with a functioning camera and mic) to turn on your video and audio. Consider practicing this alternative ahead of time.

In class, you would be dressed appropriately and sitting at a desk or table. You would refrain from distractions such as other electronics or activities unrelated to the course. Expectations for Zoom classes are the same. During our Zoom sessions, please limit your use of computers, tablets, or smart phones to class-related activities; i.e., please refrain from surfing the web, checking or sending email or texts, and similar activities during our time together on Zoom. Many employers are looking to hire graduates who can be professional and focused in an online setting, so the etiquette practiced here will contribute to your professional formation.

Class Recording

Zoom meetings of this course may be recorded. Any recordings will only be available to students registered for this class. Recordings may not be reproduced, shared with those not in the class, or uploaded to other online environments.

Academic Policies

Review the following university academic policies on the Registrar's website:

- [Academic Integrity Policy](#)
- [Academic Grading Grievance Policy](#)
- [Complete Set of Policies](#)

Academic Resources

The university offers numerous academic resources for students. Some or all of the following resources may be relevant for students in this course:

[Advice on Study Habits](#)

[Library and Learning Commons](#)

[Writing Center](#)

[Learning Assistance Programs](#)

[English-Language Learning Center \(ELLC\)](#)

[Academic Integrity Tutorial](#)

Accommodation for Disabilities

Seattle University values diverse types of learners. Faculty are committed to providing each student with an equal opportunity to participate in learning experiences. For disability and other learning-related needs and accommodations that you have already arranged via Disability

Services, please communicate with me during the first week of class through email or Zoom. Should concerns arise at any point in the quarter, please let me know as soon as possible.

If you have, or think you may have, a disability (including an “invisible disability” such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, but have not yet arranged support services and/or accommodations, I encourage you to do so through Disability Services staff at DS@seattleu.edu or (206) 296-5740. Disability-based adjustments to course expectations can be arranged only through this process. I am committed to working with you, so please do not hesitate to contact me.

Religious Accommodations

It is the policy of Seattle University to reasonably accommodate students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of their academic course or program. Please see, *Policy on Religious Accommodations for Students* (<https://www.seattleu.edu/media/policies/Policy-on-Religious-Accommodations-for-Students---FINAL.PDF>).

Office of Institutional Equity

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in educational programs or activities that receive Federal financial assistance. This prohibition includes sexual misconduct, which encompasses sexual harassment and sexual violence. Seattle U remains committed to providing a safe and equitable learning, living, and working environment. Seattle U offers emergency, medical, and other support resources, as well as assistance with safety and support measures, to community members who have experienced or been impacted by sexual misconduct.

Seattle U requires all faculty and staff to notify the University’s Title IX Coordinator if they become aware of any incident of sexual misconduct experienced by a student.

For more information, please visit <https://www.seattleu.edu/equity/>. If you have any questions or concerns, you may also directly contact the Title IX Coordinator in the Office of Institutional Equity (email: ois@seattleu.edu; phone: 206.296.2824).