

**University of Manitoba**  
**Department of Agribusiness and Agricultural Economics**  
**ABIZ 3080 Introduction to Econometrics**  
**Fall 2024**

**Instructor:** Dr. Jared Carlberg, 358 Agriculture Building, phone 474-9827  
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**Teaching Assistant/Laboratory Instructor:** Ms. Zheting Zhu,  
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**Course Time and Location:** Tues/Thurs 10:00 Helen Glass Room 360

**Course Webpage:** UM Learn

**Laboratory:** B02 Wednesday 9:30 – 10:30; 107 Human Ecology

**Office Hours:** By appointment. You may email me to find a mutually agreeable time.

**Textbooks:** Hill, R.C., W.E. Griffiths, and G.C. Judge. Undergraduate Econometrics, 2<sup>nd</sup> Edition. John Wiley & Sons, 2001.

Gutermuth, K., and R.C. Hill. Using Excel for Undergraduate Econometrics.  
John Wiley & Sons, 2001.

**Attendance:** All students are expected to attend all lectures and laboratory sessions. Failure to do so will result in grades of zero for missed quizzes, etc. (more below).

**Course Description:**

ABIZ 3080 is designed to help students develop the tools they will need to discover and measure relationships among economic variables. Statistical and economic theory will provide the foundation for practical applications. At the conclusion of the course, students should be able to develop an econometric model based upon economic theory, diagnose and correct common econometric model problems, and meaningfully interpret regression results.

**Tentative Course Outline:**

| <b>Chapter</b> | <b>Contents</b>                            |
|----------------|--|
| 1              | Introduction to Econometrics               |
| 2              | Review of Probability                      |
| 3              | Simple Linear Regression                   |
| 4              | Properties of the Least Squares Estimators |
| 5              | Inference in the Simple Regression Model   |

|    |   |
|----|---|
| 6  | Coefficient of Determination; Functional Form |
| 7  | Multiple Regression                           |
| 8  | Inference in the Multiple Regression Model    |
| 9  | Binary (Dummy) Variables                      |
| 11 | Heteroskedasticity                            |
| 12 | Autocorrelation                               |
| 16 | Time Series Data & Stationarity               |

If time remains at the end of the course, advanced special topics may be introduced.

### **Exams:**

Two exams will be given in the course, each worth 30% of the final grade. I may decide to give in-class or take-home exams. If the former, the midterm exam will be given in early November. In-class exams may include mathematical problems, derivations or proofs, short answer and long answer questions. Take-home exams will be project-based and require students to obtain and analyze data sets assigned by the instructor, and meaningfully interpret results. The final exam, scheduled by the University, will take place during the December exam period. **Students should not make travel arrangements for Christmas until the exam schedule is released.** No student will be permitted to write the exam at an alternate time to accommodate travel plans. Calculators are not permitted during in-class examinations.

Students who miss an exam without a doctor's note will receive a grade of zero on the exam. Students who miss an exam with a doctor's note may at the discretion of the professor be assigned a 5,000-word term paper in lieu of the exam, in which case they will take a comprehensive final exam. The term paper topic will be assigned by the professor.

**Students who fail to earn a grade of 50% or better on at least one of the midterm examination and final examination will receive a grade of F in the course,** regardless of their performance on the homework and laboratory assignments.

### **Homework Assignments:**

Homework assignments provide students with the opportunity to apply the concepts learned in class and will be given on an approximately weekly basis. Students are permitted to work together on assignments, but turning in the same answers constitutes inappropriate collaboration and will be penalized as harshly as possible. Assignments must be legible to receive a grade. Assignments are due at the beginning of class on the due date; **late assignments will be penalized by 25% per day late or portion thereof.** **All homework assignments are required.** Students who do not complete all assignments will receive a grade of "incomplete" in the course.

### **Laboratory Assignments:**

Laboratory assignments will be taken from the Excel manual required for the course. Data files required for the labs can be found on the course homepage. **Attendance at the laboratory sessions is mandatory; students will complete the lab assignments during the lab session and submit them at the end of the period.** Lab sessions may also be used to seek assistance on homework questions. **Students who do not complete all lab assignments will receive a grade of “incomplete” in the course.**

### **Quizzes:**

Quizzes will be given regularly during class period throughout the semester without prior notice. These quizzes will usually cover material covered recently in class but may include other topics of the instructor’s choosing. **Students missing more than two of these quizzes will be debarred (prevented) from taking the final exam (see below).**

### **Debarment:**

From the *University of Manitoba Undergraduate Academic Calendar*:

“Regular attendance is expected of all students in the course.

An instructor may initiate procedures to debar a student from attending classes and from final examinations and/or from receiving credit where unexcused absences exceed those permitted by faculty or school regulations.

A student may be debarred from class, laboratories, and examinations by action of the dean/director for persistent non-attendance, failure to produce assignments to the satisfaction of the instructor, and/or unsafe clinical practice or practicum. Students so debarred will have failed that course.”

**Students who miss more than two quizzes, or who fail to submit any of the required laboratory assignments or written assignments, will be debarred (prevented) from taking the final examination.** Students with excessive unexcused absences from classes may, after written warning, be debarred from taking the final examination. *Any student so debarred will receive a grade of F in the course.*

### **Devices & Course Recording Policy:**

Students are not permitted to be in possession of laptops, cellular phones, tablets or any other device during exams and they should be turned off during class. Device/cell phone use (including texting) during class is not permitted, and students violating this policy will be asked to leave class. No audio or video recordings during class time are permitted.

### **Grading:**

|                                |     |
|--------------------------------|-----|
| Midterm Exam                   | 30% |
| Homework Assignments & Quizzes | 30% |
| Laboratory Assignments         | 10% |
| Final Exam                     | 30% |

Students will be provided with written comments, as appropriate, and numeric grades for all materials submitted. At the end of the semester, grades will be converted from numeric values to letter grades in accordance with the University of Manitoba definitions (i.e. A+ = exceptional, etc.). Further information on descriptions associated with letter grades can be found in the University of Manitoba calendar.

### **Academic Dishonesty:**

Cheating/Plagiarism will be dealt with harshly, including turning in copied or shared homework assignments. There are University regulations that prohibit “inappropriate collaboration.” Please read the Academic Integrity section in the *University of Manitoba Undergraduate Academic Calendar* to familiarize yourself with relevant University policies.

Where students usually get into trouble in ABIZ 3080 with respect to academic dishonesty is by sharing answers to written and/or laboratory assignments and/or exams. It is somewhat natural to “work together” on assignments. This can be dangerous for a couple of reasons: first, over my 20 years of teaching this course, people often get “left behind” – they have friends they work with who do all of the work for them, they never really understand what is going on, they copy other people’s answers, and then they are lost on exams because they never really engaged with the course.

The second reason it is dangerous to “work together” is that inevitably turning in others’ work, even in your own words, leads to me or the Teaching Assistant recognizing that your work is very similar to one or more other students, which can lead to serious penalties for inappropriate collaboration. Just do your own work, and come get help from myself or the TA if you are really struggling. It’s way better to take the time to understand what you are doing, and way more satisfying to get a grade that reflects your own effort and knowledge – trust me!

**Students with Disabilities:** The University of Manitoba’s Student Accessibility Services (SAS) office is available to facilitate the implementation of accommodations, and the course instructor is willing to meet with students and their representatives to discuss accommodations recommended by SAS as needed.

Students may consult Schedule A on our UM Learn page for information pertaining to additional supports, resources, etc.