ECON 345
Introduction to Econometrics
Summer 2019
Department of Economics
George Mason University

Instructor: Jian Song
Email: jsong25@gmu.edu
Classes: Tuesdays & Thursdays, 7:00PM-10:00PM; Saturdays, 8:30AM-11:30AM
Location: Art & Design Building 2026
Office hours: Thursdays, 5:00PM-6:00PM at Mason Hall D150 Tutoring room or by appointment

Course Description:
This course provides an introduction on using modern statistical techniques in estimating economic relations. We will cover topics including simple regression models, multiple regression models, panel data analysis and time series data analysis. The formal prerequisites for this course are ECON 306, ECON 311, STAT 250 and STAT 350 or STAT 344 and STAT 354. You should be familiar with basic knowledge of probability and statistics, as well as some algebra.

Textbook:
Introductory Econometrics: A Modern Approach (7th edition) by Jeffrey M. Wooldridge

Note: Previous editions of this textbook are available online in PDF form. If used, students are responsible to make sure the chapters correspond to each week’s reading assignments.

Grades:

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<tbody>
<tr>
<td>Homework</td>
<td>30%</td>
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<tr>
<td>Presentation</td>
<td>15%</td>
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<tr>
<td>Midterm – on June 6</td>
<td>25%</td>
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<tr>
<td>Final – on June 22</td>
<td>30%</td>
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Your course grade will be based 30% on the HW sets (drop one lowest grade, the rest equally weighted), 15% on the presentation, 25% on the midterm exam and 30% on the final exam. Good class participation can improve your evaluation.

Homework:
Four homework sets (HW) will be handed out, emailed or uploaded on blackboard. Each student must turn in their own answers, while group discussion is encouraged. Please turn in a hardcopy of answers at the beginning of the class on the due date. I will not accept late HW assignments. For due dates, see Course Schedule.
Presentation:
Each student will need to present one paper from the reading articles. You can also choose the papers you're interested in and related to our class to present. The presenter is encouraged to incorporate his own thoughts in the presentation.

For your presentation, please choose three papers you’d like to present to the class, and send me the information of the papers, list from most preferred to less preferred, before May 26. You only need to present one paper. More information about the presentation will be provided separately.

Midterm/Final:
There will be two exams. The midterm will be on June 6 from 7:00PM to 9:30PM and it covers the first half of the course. The cumulative final will be on June 22 from 7:30AM to 10:15 AM (start time different from regular class). I do not give make-up exams, if you miss the midterm with a valid excuse, its weight will be shifted to the final. Exams missed for unexcused reasons will receive a score of 0.

Course Schedule (tentative):

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
<th>HW</th>
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<tbody>
<tr>
<td>5/21</td>
<td>Introduction to econometrics</td>
<td>Woolridge Ch.1</td>
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<tr>
<td>5/23</td>
<td>Simple regression model</td>
<td>Woolridge Ch.2</td>
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<tr>
<td>5/25</td>
<td>Multivariate regression model</td>
<td>Woolridge Ch.3.1 – 3.4</td>
<td>HW1 assigned</td>
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<td>5/28</td>
<td>Hypothesis tests</td>
<td>Woolridge Ch.4; C.5-C.6</td>
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<tr>
<td>5/30</td>
<td>Dummy variables</td>
<td>Woolridge Ch.7</td>
<td>HW1 due; HW2 assigned</td>
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<tr>
<td>6/1</td>
<td>Heteroskedasticity</td>
<td>Woolridge Ch.8</td>
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<tr>
<td>6/4</td>
<td>Specifications and Review</td>
<td>Woolridge Ch.9</td>
<td>HW2 due;</td>
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<td>6/6</td>
<td>Midterm Exam, 7:00PM-9:30PM</td>
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<tr>
<td>6/8</td>
<td>Time series (Part 1)</td>
<td>Woolridge Ch.10</td>
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<tr>
<td>6/11</td>
<td>Time series (Part 2)</td>
<td>Woolridge Ch.11</td>
<td>HW3 assigned</td>
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<tr>
<td>6/13</td>
<td>Panel data (Part 1)</td>
<td>Woolridge Ch.13</td>
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<tr>
<td>6/15</td>
<td>Panel data (Part 2)</td>
<td>Woolridge Ch.14</td>
<td>HW3 due; HW4 assigned</td>
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<td>6/18</td>
<td>Presentation</td>
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<td>6/20</td>
<td>Presentation and Review</td>
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<td>HW4 due</td>
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<td>6/22</td>
<td>Final Exam, 7:30AM-10:15AM</td>
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The standards, requirements and course schedule set forth in this syllabus may be modified at any time by the course instructor. Notice of such changes will be by announcement in class and via email.

Reading Articles:
1. Angrist, J.D., "Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from


119-157.

**Students with disabilities:**
Students with Faculty Contact Sheets for this class need to present them to the instructor as soon as possible. Other students requiring reasonable accommodations, as covered under the Americans with Disabilities Act, should contact the Disability Resource Center (DRC) to open up a DRC file and discuss needed accommodations. Questions and requests for reasonable accommodations should be directed to DRC, 234 SUB I, phone (703) 993.2474 or email dwyne@gmu.edu.

**Honor code:**
George Mason University is an honor code university. Students pledge not to cheat, lie, plagiarize or steal in academic matters.

**Feedback:**
Students are encouraged to provide me with regular feedback on how you are experiencing the course throughout the semester, either in person after class or by email.