Instructor: David Aadland  
Office: BU 261  
Telephone: Office #: 766-4931  
Office Hours: TR 11:30 – 1:00  
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Class Homepage: [http://www.uwyo.edu/aadland/classes/econ5350/](http://www.uwyo.edu/aadland/classes/econ5350/)

**Course Description:** The course will review topics in probability theory and mathematical statistics. The course will also provide an introduction to the classical linear regression model, estimation, hypothesis testing, and prediction.

**Course Prerequisites:** Calculus and Basic Statistics.

**Primary Texts:**  
*Econometric Analysis* by William H. Greene (7th edition)  
*A Guide to Econometrics* by Peter Kennedy (6th edition)

**Course Objectives:**  
The primary objective of this course is to offer an advanced introduction to econometric theory and practice. Upon completion of the entire econometrics sequence, you should be able to (i) comprehend most of the applied econometrics found in scholarly journals and (ii) initiate applied econometric analysis within your own research program.

**Course Requirements:**

- **Computer Software Package.** We will be using Matlab extensively throughout the course. Matlab is a matrix-based language that is extremely flexible and allows the user to directly program routines that are often unobserved in “black-box” software packages.

- **Examinations.** There will be two in-class exams: a midterm and a comprehensive final.

- **Problem Sets.** There will be a total of eight problem sets, which will be made available on our class webpage. The due date will be clearly printed at the top of each assignment. No late assignments will be accepted. Collaborative work is encouraged; however, each student is required to turn in an independently composed set of answers.
Grading: Examinations and problem sets will be weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Problem Sets</td>
<td>80 pts</td>
<td>21.1%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>100 pts</td>
<td>26.3%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200 pts</td>
<td>52.6%</td>
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<tr>
<td><strong>Total</strong></td>
<td>380 pts</td>
<td><strong>100%</strong></td>
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Attendance Policy: Regular attendance is expected.

Academic Dishonesty Policy:
UNIREG 802, Revision 2, defines academic dishonesty as “an act attempted or performed which misrepresents one’s involvement in an academic task in any way, or permits another student to misrepresent the latter’s involvement by assisting the misrepresentation.” Academic dishonesty will not be tolerated in this class; any instances will be referred to the university’s established procedure for judging such cases, with severe penalties as found appropriate.

Disclaimer:
Subsequent changes may be made to any aspect or detail of this Syllabus if and when necessary. Any changes will be announced in class as soon as practical.

Inclusive Access: This course is taking part in a newer program called Inclusive Access, The University of Wyoming Bookstore’s new digital course material service. This new service enables the bookstore to offer students instant access to online course materials, like textbooks and class websites, at the lowest price possible. This semester your course will be included in a select number of courses taking part in this newly available program. The bookstore has implemented this program to save students as much money as possible to combat the current high prices of course materials.

So what does this mean for you, the student? It means you immediately have access to your digital course materials on the first day of class! To gain access to your content you’ll log in to your UWYO course and click the RedShelf tool.

Your student account has been charged the bookstore’s exclusive low price. If, for some reason, you decide you do not want to purchase these materials from the bookstore, you can opt-out of the Inclusive Access program by going to the RedShelf link in your UWYO course, clicking the View Course Materials button, scrolling to the bottom of the page to click the grey opt-out button and following the prompts. If you opt-out by the add/drop deadline of 9/5/17 you will receive a refund to your student account. Please contact the bookstore with any questions about refunds or Inclusive Access.
Course Outline (tentative):

Review of Probability and Distribution Theory
Review of Statistical Inference
Chapter 2. The Linear Regression Model
Chapter 3. Least Squares
Chapter 4. The Least Squares Estimator

Midterm Exam

Chapter 5. Hypothesis Tests and Model Selection
Chapter 6. Functional Form and Structural Change
Chapter 7. Nonlinear Regression Models
Chapter 9. The Generalized Regression Model
Chapter 14. Maximum Likelihood Estimation

Final Exam