Basic Information

Course Prerequisite(s): STAT 7710 or my consent.

Note(s): if you are from another department and looking for a good survey of different econometric techniques, ECONOM 7371 may serve you better; ECONOM 8472 provides a deep (not wide) understanding of foundational ideas.

Class Meetings: 11:00am–12:15pm, Tuesdays and Thursdays, 208 Middlebush Hall [map].

Instructor: Dave Kaplan, 326 Professional Bldg [map]. Office hours 12:16–2:30pm Tuesdays (or email me to make an appointment if you have a conflict), kaplandm@missouri.edu (please start any email subject with “8472: ”; or message me through Blackboard)

Texts and Materials

Textbook: required: [http://www.ssc.wisc.edu/~bhansen/econometrics/](http://www.ssc.wisc.edu/~bhansen/econometrics/) Bruce Hansen’s graduate econometrics text, available at the Mizzou Store for around $7. (Note: you will be allowed to bring the printed version to exams, but not a laptop/etc.) Other (respectable) econometrics lecture notes may be found here: [http://econphd.econwiki.com/notes.htm#Econometrics](http://econphd.econwiki.com/notes.htm#Econometrics) (and please let me know if any are particularly helpful to you!).

Blackboard site: we will have a course site on Blackboard, with course information, announcements, grades, etc. Please let me know ASAP if you cannot access it.

Assignments and Exams

See Table 1 for the schedule of topics, assignments, and exams.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Assignment(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>ES #1</td>
</tr>
<tr>
<td>2</td>
<td>Conditional expectation and projection</td>
<td>ES #2</td>
</tr>
<tr>
<td>1–2</td>
<td>Midterm #1, in class</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The algebra of least squares</td>
<td>ES #3</td>
</tr>
<tr>
<td>4</td>
<td>Least squares regression</td>
<td>ES #4</td>
</tr>
<tr>
<td>3–4</td>
<td>Midterm #2, in class</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>An introduction to large sample asymptotics</td>
<td>ES #5</td>
</tr>
<tr>
<td>6</td>
<td>Asymptotic theory for least squares</td>
<td>ES #6</td>
</tr>
<tr>
<td>8</td>
<td>[time permitting] Hypothesis testing</td>
<td></td>
</tr>
<tr>
<td>all</td>
<td></td>
<td>Final exam, TBA</td>
</tr>
</tbody>
</table>

Grading Criteria

Plus/minus grading is used in this course, and the final exam is mandatory. Relative weighting of assignments is shown in Table 2.

You will be allowed to use the textbook, your notes, and any other printed materials on exams, but you may not have any electronics (laptop, phone, etc.). You may discuss other assignments with your classmates, but you must turn in your own work.
Table 2: Relative weighting of assignments.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percent of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES #1</td>
<td>3</td>
</tr>
<tr>
<td>ES #2</td>
<td>3</td>
</tr>
<tr>
<td>Midterm exam #1</td>
<td>25</td>
</tr>
<tr>
<td>ES #3</td>
<td>3</td>
</tr>
<tr>
<td>ES #4</td>
<td>3</td>
</tr>
<tr>
<td>Midterm exam #2</td>
<td>22</td>
</tr>
<tr>
<td>ES #5</td>
<td>3</td>
</tr>
<tr>
<td>ES #6</td>
<td>3</td>
</tr>
<tr>
<td>Final exam</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Letter grades will be mapped in the usual way, i.e. A range is 90–100%, B range 80–89%, C 70–79%, F below that. Note that any “curve,” if it seems appropriate, will not enforce predetermined grade proportions but rather move everyone up together—that is, you are not competing with the student next to you for a fixed number of A grades.

**Penalties for Late Work**

Assignments turned in late but before the beginning of the next class will receive half the points earned. After the beginning of the next class, no credit will be given, though I am happy to still give feedback on the work if you turn it in.

Students are expected to take exams at the times scheduled in the syllabus. In case of an emergency such as serious illness, family emergency, or a legitimate conflict with recognized University activities, you must contact me immediately (i.e., before the exam) to request a makeup and provide documentation of the emergency. (Email is fine if it’s sent beforehand, even if I don’t read it till after the exam.) If you miss (and don’t make up) both midterms or the final, then you will receive an “incomplete” for your semester grade.

**Grading Questions**

Graded work will be returned at the end of class. You will have time to review the comments and ask questions. If you think something may be amiss—points added incorrectly, logic of proof misunderstood, etc.—then you may write a note and leave the work with me to review. If it is a non-trivial question, I may review the work in its entirety and adjust other parts up or down if there are other inconsistencies with the grading rubric. After leaving the classroom, you may still ask questions (and expect reasonable responses from me), but I won’t change the recorded grade.

**Course Expectations**

To gain the most from this class, you would:

- try hard on all exercises
- try extra exercises if you don’t yet feel comfortable with the material
• ask questions during class (and of course always attend class), or office hours

• start exercise sets early to realize what you don’t understand in time to ask questions

• ask questions of your classmates (and answer theirs)

Re: the debated existence of “dumb questions”: I personally find some questions to be smarter than others (having asked my share of “dumb” questions over the years), but you can expect me to treat you with the same level of respect regardless of your question’s intelligence. I highly value all sincere, honest questions.

During class, usually some of the time I will present material on the blackboard. The content will always overlap with the textbook, though the intuitive arguments/pictures/etc. may sometimes differ. We will also sometimes break into smaller groups to discuss questions, before discussing as a large group together. At any time during class, you are welcome to raise your hand and ask a question. You may find that reading the textbook before class lets you better formulate questions during class, but this is not required.

You can expect me to:

• plan the course, and alter the plan as needed. I welcome your real-time feedback, and I will consider it seriously even if I ultimately disagree.

• provide you opportunities to practice new skills/understanding, through both in-class discussions and at-home exercises. Imagine training for a marathon by listening to lectures and reading books on running without ever actually running/exercising—it is just as foolish to train in econometrics without any exercises.

• be patient when you are struggling with a new concept—this is how learning occurs, actively and not passively

• respect you as you are, regardless of your current academic level or extra-academic situation

If all goes well, by the end of the semester, you will be able to:

• recognize and define: objects like “conditional expectation function,” estimator properties like “mean squared error,” methods like “OLS,” convergence concepts like “convergence in probability,” etc.

• describe how OLS works in precise mathematical terms

• intuitively and mathematically describe assumptions required for various methods/interpretations

• comfortably apply basic properties of (conditional) expectation and variance

• run basic Stata commands, and feel comfortable learning more commands on your own

• distinguish economic and statistical significance

• judge the appropriateness of an econometric method in a given case

• think about what data and what econometric method you might want in order to answer a given economic question, both ideally and practically
ACADEMIC INTEGRITY

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person’s work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

The University has specific academic dishonesty administrative procedures. Although policy states that cases of academic dishonesty must be reported to the Office of the Provost for possible action, the instructor may assign a failing grade for the assignment or a failing grade for the course, or may adjust the grade as deemed appropriate. The instructor also may require the student to repeat the assignment or to perform additional assignments. In instances where academic integrity is in question, faculty, staff and students should refer to Article VI of the Faculty Handbook. Article VI is also available in the M-Book. Article VI provides further information regarding the process by which violations are handled and sets forth a standard of excellence in our community.

ACCOMMODATION OF DISABILITIES

Students with Disabilities:

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible.

If disability related accommodations are necessary (for example, a note taker, extended time on exams, captioning), please register with the Office of Disability Services, S5 Memorial Union, (573) 882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on “Disability Resources” on the MU homepage.

INTELLECTUAL PLURALISM

The University community welcomes intellectual diversity and respects student rights. Students who have questions or concerns regarding the atmosphere in this class (including respect for diverse opinions) may contact the Departmental Chair or Divisional Director; the Director of the Office of Students Rights and Responsibilities; or the MU Equity Office, or by email at equity@missouri.edu. All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course.

ACADEMIC INQUIRY, COURSE DISCUSSION, AND PRIVACY

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. In this class, students may make audio or video recordings of course activity unless specifically prohibited by the faculty member. However, the redistribution of audio or video recordings of statements or comments from the course to individuals who are
not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of [Section 200.020] of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

**UNIVERSITY OF MISSOURI NOTICE OF NONDISCRIMINATION**

The University of Missouri System is an Equal Opportunity/ Affirmative Action institution and is nondiscriminatory relative to race, religion, color, national origin, sex, sexual orientation, age, disability or status as a Vietnam-era veteran. Any person having inquiries concerning the University of Missouri’s compliance with implementing Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans With Disabilities Act of 1990, or other civil rights laws should contact the Assistant Vice Chancellor, [Human Resource Services](http://faculty.missouri.edu/~kaplandm) University of Missouri, 130 Heinkel Building, Columbia, MO 65211, (573) 882-4256, or the Assistant Secretary for Civil Rights, U.S. Department of Education.

**GRIEVANCE POLICY**

Information concerning student grade appeal procedures and non-academic grievances and appeals may be found in the Student Handbook.

Last updated: January 11, 2016

[http://faculty.missouri.edu/~kaplandm](http://faculty.missouri.edu/~kaplandm)