ECONOMICS 546: THEMES IN ECONOMETRICS

Winter Session Spring Term 2019: Section A01

Dr Judith A Clarke; BEC 376

OVERVIEW: The focus of this course is on the understanding and application of several key estimation and testing techniques that are used in econometrics: maximum likelihood, instrumental variables, generalized method of moments and minimum distance estimation. We examine both theory and practice, with examples, exercises and empirical applications forming a fundamental part of the course. A project using maximum likelihood techniques enables you to explore some key ideas and tools.

LECTURES: Monday & Thursday 1pm-2:20pm in BEC 363.

LABORATORY CLASSES: Wednesday 10:30am-11:20am in the BEC Computing Laboratory 180 or in BEC 363. We will be using EViews and Stata econometrics packages in our work.

CONSULTATION: My available office time is Monday 3:30pm to 5pm and Thursday 4pm to 5:30pm. Please also avail yourself of the consultation times for the TA – I will inform you of these hours as soon as they are available.

Email: You should not use email to communicate with me – I will not consider or acknowledge any emails from you. I strongly encourage you to ask any clarifying questions about the syllabus and other matters at the beginning of class. For more in-depth discussions (such as on course material or your project) please plan to meet with me during my office time. Conversations are far better in person rather than via email, as it allows us to get to know each other better, enabling me to better appreciate your concerns.

RECOMMENDED BOOKS: The recommended books for this course are:

Additional texts that might also be useful include:

*The University of Victoria is committed to promoting critical academic discourse while providing a respectful and productive learning environment. All members of the university community have the right to experience, and the responsibility to help create, such an environment.*
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The above texts have been placed on reserve, along with a copy of Wooldridge’s text.

**MATERIAL AVAILABLE VIA COURSESPACES:** Class overheads will be available via CourseSpaces. My aim in providing you with copies of class overheads is to enable you to concentrate more effectively during class time. Please note, however, that the overheads should not be relied on as the sole source material; all material covered in the course is examinable. Please READ/SCAN ahead before class – it will assist your learning enormously!

You will also be able to download the assignments, project details, lab exercises, tests and their solutions, and any practice exercises from CourseSpaces when appropriate.

**GRADING:**
- Assignments (2): 20% (due in class on Monday January 28 & Monday February 25).
- Project: 25% (due in my mail box by noon on Tuesday April 9);
- Project draft: 10% (due in class on Monday March 25);
- Project Presentation: 10% (last week of term - schedule to be announced);
- Term Tests (2): 35% (in class on Monday February 11 and Monday March 11).

**NOTES:**
As I believe that students should receive the same information regarding assignments, the ONLY time I will address ANY assignment queries is at the beginning of class. That is, I will not respond to assignment questions outside of class. The TA will not respond to ANY assignment questions. In addition, while I encourage group learning, your answers to the assignment questions, including any computer outputs, must be your own independent work.
COURSE OUTLINE:
References will be given out in class at the beginning of each topic. It is highly likely that we will not cover all topics.

**Topic 1:** Introduction
  1.1 Background, estimator & test properties
  1.2 Basic asymptotic theory

**Topic 2:** Maximum Likelihood
  2.1 Maximum likelihood estimation
  2.2 Likelihood ratio, Wald & Lagrange multiplier tests
  2.3 Quasi-maximum likelihood estimation
  2.4 Applications:
     2.4.1 Seemingly Unrelated Regressions
     2.4.2 Count Data Models
     2.4.3 Qualitative & Limited Dependent Variable Models

**Topic 3:** A Brief Look at Some Simulation Methods

**Topic 4:** Instrumental Variables
LETTER GRADES: All assessment in this course will be assigned a numerical score. Each will then be appropriately weighted to give a total score for the course out of a possible 100%. The following will be used.

<table>
<thead>
<tr>
<th>Passing Grades</th>
<th>Grade Point Value</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>9</td>
<td>90-100</td>
<td>Exceptional, outstanding and excellent performance. Normally achieved by a minority of students. These grades indicate a student who is self-initiating, exceeds expectations and has an insightful grasp of the subject matter.</td>
</tr>
<tr>
<td>A</td>
<td>8</td>
<td>85-89</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>7</td>
<td>80-84</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>6</td>
<td>77-79</td>
<td>Very good, good and solid performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one or more areas balanced with satisfactory grasp in other areas.</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>73-76</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>4</td>
<td>70-72</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>3</td>
<td>65-69</td>
<td>Satisfactory, or minimally satisfactory. These grades indicate a satisfactory performance and knowledge of the subject matter.</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>60-64</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>50-59</td>
<td>Marginal performance. A student receiving this grade demonstrated a superficial grasp of the subject matter.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Failing Grades</th>
<th>Grade Point Value</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>0</td>
<td>0-49</td>
<td>Unsatisfactory performance. Wrote final exam and completed course requirements; no supplemental.</td>
</tr>
<tr>
<td>N</td>
<td>0</td>
<td>0-49</td>
<td>Did not write final examination or complete course requirements by the end of term or session; no supplemental.</td>
</tr>
</tbody>
</table>

Note that E grades will not be assigned.
COURSE POLICIES:

- I assume that students are familiar with all Department of Economics course policies. These are detailed at http://www.uvic.ca/socialsciences/economics/undergraduate/home/course%20policies/index.php and cover, in particular:
  - Academic integrity, including cheating and plagiarism.
  - Academic concession.
  - The policy is attached for your reference.

- Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and register with the Center for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations http://www.uvic.ca/services/cal/. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

- Remember:
  - Questions regarding class material **must** be asked during class or with me during office time. Come talk with me in person!
  - Questions regarding course assignments **must** be asked at the beginning of class and will not be answered outside of class time. This ensures that all students receive the same information on an assignment.
  - Emails **will** be disregarded.

- Accommodation for missed term tests, late project deadlines and late assignments will be given only on the basis of documented illness, accident, or family affliction. Students should immediately consult with a physician, a counsellor, or another health professional to obtain official documentation. This documentation must specifically cover the date of the missed examination or assignment deadline; it should normally be dated on or before this date and be submitted to me within 10 days of this date. Please give me appropriate documentation in class or during my office times.

- Please keep a copy of all work – including material that you hand in or material that is returned – until final marks have been posted.

- I recommend that you do not settle travel plans until after details regarding the final examination have been confirmed. Should you wish to book travel prior to that date, I suggest that you book a departure date for after the end of the examination period (see the University Calendar). It is Departmental policy that there is no special accommodation for travel conflicts with an examination.
**DRAFT SCHEDULE:** Below is the draft schedule for this course, which may alter given progress through the term. Any changes will be discussed in class.

<table>
<thead>
<tr>
<th>MONDAY DATE</th>
<th>LECTURE WEEK</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 7</td>
<td>1</td>
<td>JAN 7 LEC1 FIRST DAY OF CLASSES</td>
<td>JAN 8</td>
<td>JAN 9</td>
<td>JAN 10 LEC2</td>
<td>JAN 11</td>
</tr>
<tr>
<td>Jan 14</td>
<td>2</td>
<td>JAN 14 LEC3 ASS1 POSTED</td>
<td>JAN 15</td>
<td>JAN 16 LAB 1</td>
<td>JAN 17 LEC4</td>
<td>JAN 18</td>
</tr>
<tr>
<td>Jan 21</td>
<td>3</td>
<td>JAN 21 LEC5</td>
<td>JAN 22</td>
<td>JAN 23 LAB 2</td>
<td>JAN 24 LEC6</td>
<td>JAN 25</td>
</tr>
<tr>
<td>Jan 28</td>
<td>4</td>
<td>JAN 28 LEC7 ASS3 DUE</td>
<td>JAN 29</td>
<td>JAN 30 LAB 3</td>
<td>JAN 31 LEC8</td>
<td>FEB 1</td>
</tr>
<tr>
<td>Feb 4</td>
<td>5</td>
<td>FEB 4 LEC9</td>
<td>FEB 5</td>
<td>FEB 6 LAB 4</td>
<td>FEB 7 LEC10 ASS2 POSTED</td>
<td>FEB 8</td>
</tr>
<tr>
<td>Feb 11</td>
<td>6</td>
<td>FEB 11 LEC11 TEST 1</td>
<td>FEB 12</td>
<td>FEB 13 LAB 5</td>
<td>FEB 14 LEC12</td>
<td>FEB 15</td>
</tr>
<tr>
<td>Feb 18</td>
<td>7</td>
<td>FEB 18 FAMILY DAY READING BREAK</td>
<td>FEB 19 READING BREAK</td>
<td>FEB 20 READING BREAK</td>
<td>FEB 21 READING BREAK</td>
<td>FEB 22 READING BREAK</td>
</tr>
<tr>
<td>Feb 25</td>
<td>8</td>
<td>FEB 25 LEC13 ASS2 DUE</td>
<td>FEB 26</td>
<td>FEB 27 LAB 6</td>
<td>FEB 28 LEC14</td>
<td>MAR 1</td>
</tr>
<tr>
<td>Mar 4</td>
<td>9</td>
<td>MAR 4 LEC15</td>
<td>MAR 5</td>
<td>MAR 6 LAB 7</td>
<td>MAR 7 LEC16</td>
<td>MAR 8</td>
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<tr>
<td>Mar 11</td>
<td>10</td>
<td>MAR 11 LEC17 TEST 2</td>
<td>MAR 12</td>
<td>MAR 13 LAB 8</td>
<td>MAR 14 LEC18</td>
<td>MAR 15</td>
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<tr>
<td>Mar 18</td>
<td>11</td>
<td>MAR 18 LEC19</td>
<td>MAR 19</td>
<td>MAR 20 LAB 9</td>
<td>MAR 21 LEC20</td>
<td>MAR 22</td>
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<tr>
<td>Mar 25</td>
<td>12</td>
<td>MAR 25 LEC21 PROJECT DRAFT DUE</td>
<td>MAR 26</td>
<td>MAR 27 LAB 10</td>
<td>MAR 28 LEC22</td>
<td>MAR 29</td>
</tr>
<tr>
<td>Apr 1</td>
<td>13</td>
<td>APR 1 LEC23</td>
<td>APR 2</td>
<td>APR 3 LAB 11</td>
<td>APR 4 LEC24</td>
<td>APR 5 LAST DAY OF TERM</td>
</tr>
</tbody>
</table>
UNIVERSITY OF VICTORIA POLICY ON ACADEMIC INTEGRITY

Principles of Academic Integrity

Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and Responsibility. It is expected that students, faculty members and staff at the University of Victoria, as members of an intellectual community, will adhere to these ethical values in all activities related to learning, teaching, research and service. Any action that contravenes this standard, including misrepresentation, falsification or deception, undermines the intention and worth of scholarly work and violates the fundamental academic rights of members of our community. This policy is designed to ensure that the university’s standards are upheld in a fair and transparent fashion. Students are responsible for the entire content and form of their work. Nothing in this policy is intended to prohibit students from developing their academic skills through the exchange of ideas and the utilization of resources available at the university to support learning (e.g., The Centre for Academic Communication). Students who are in doubt as to what constitutes a violation of academic integrity in a particular instance should consult their course instructor.

Definitions
In this policy:
• “work” is defined as including the following: written material, laboratory work, computer work, computer code, assignments, research materials, research results, musical or art works, oral reports, audiovisual or recorded presentations, lesson plans, and material in any medium submitted to an instructor for grading purposes.
• “Dean” is defined as the Dean of a student’s faculty and, in the case of graduate students, is defined as the Dean of Graduate Studies.
• “Chair” is defined as including the Chair or Director of a unit or, in the case of non-departmentalized faculties, the Dean.
• “instructor” is defined to include instructors and graduate supervisors.

Academic Integrity Violations
Academic integrity violations covered by this policy can take a number of forms, including the following:

Plagiarism
A student commits plagiarism when he or she:
• submits the work of another person in whole or in part as original work
• gives inadequate attribution to an author or creator whose work is incorporated into the student’s work, including failing to indicate clearly (through accepted practices within the discipline, such as footnotes, internal references and the crediting of all verbatim passages through indentations of longer passages or the use of quotation marks) the inclusion of another individual’s work
• paraphrases material from a source without sufficient acknowledgment as described above
The university reserves the right to use plagiarism detection software programs to detect plagiarism in essays, term papers and other work.

Unauthorized Use of an Editor
An editor is an individual or service, other than the instructor or supervisory committee, who manipulates, revises, corrects or alters a student’s written or non-written work. The use of an editor, whether paid or unpaid, is prohibited unless the instructor grants explicit written authorization. The instructor should specify the extent of editing that is being authorized. Review by fellow students and tutoring that do not include editing are normally permitted. In addition to consulting with their instructors, students are encouraged to seek review of and feedback on their work that prompts them to evaluate the work and make changes themselves.

Multiple Submission
Multiple submission is the resubmission of work by a student that has been used in identical or similar form to fulfill any academic requirement at UVic or another institution. Students who do so without prior permission from their instructor are subject to penalty.

Falsifying Materials Subject to Academic Evaluation
Falsifying materials subject to academic evaluation includes, but is not limited to:
• fraudulently manipulating laboratory processes, electronic data or research data in order to achieve desired results
• using work prepared in whole or in part by someone else (e.g., commercially prepared essays) and submitting it as one’s own
• citing a source from which material was not obtained
• using a quoted reference from a non-original source while implying reference to the original source
• submitting false records, information or data, in writing or orally

Cheating on Work, Tests and Examinations
Cheating includes, but is not limited to:
• copying the answers or other work of another person
• sharing information or answers when doing take-home assignments, tests or examinations except where the instructor has authorized collaborative work
• having in an examination or test any materials or equipment other than those authorized by the examiners
• accessing unauthorized information when doing take-home assignments, tests or examinations
• impersonating a student on an examination or test, or being assigned the results of such impersonation
• accessing or attempting to access examinations or tests before it is permitted to do so

Students found communicating with one another in any way or having unauthorized books, papers, notes or electronic devices in their possession during a test or examination will be considered to be in violation of this policy.

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Aiding Others to Cheat
It is a violation to help others or attempt to help others to engage in any of the conduct described above.

Procedures for Dealing with Violations of Academic Integrity
Procedures for determining the nature of alleged violations involve primarily the course instructor and the Chair. Procedures for determining an appropriate penalty also involve Deans, the Vice-President Academic and Provost and, in the most serious cases, the President.

Allegations
Alleged violations must be documented by the instructor, who must inform the Chair. The Chair shall then inform the student in writing of the nature of the allegation and give the student a reasonable opportunity to respond to the allegation. Normally, this shall involve a meeting between the instructor, the Chair, the student and, if the student requests in advance, another party chosen by the student to act as the student’s adviser. If the student refuses to provide a response to the allegation or to participate in the process, the Chair may proceed to make a determination.

Determining the Nature of the Violation
The Chair shall make a determination as to whether compelling information exists to support the allegation.

Determining Appropriate Penalties
If there is compelling information to support the allegation, the Chair shall contact the Office of the Registrar to determine if the student’s record contains any other confirmed academic integrity violations. If there is no record of prior violations, the Chair shall make a determination with respect to the appropriate penalty, in accordance with this policy.

Referral to the Dean
Where there have been one or more prior violations and the Chair has determined that compelling information exists to support the allegation, the Chair shall forward the case to the Dean (or the Dean’s designate. In the Faculties of Humanities, Science and Social Sciences, the designate may be the Associate Dean Academic Advising). In situations where the student is registered in more than one faculty, the case will be forwarded to the Dean responsible for the course. The Chair may submit a recommendation to the Dean with respect to a proposed penalty.

Letters of Reprimand
Any penalty will be accompanied by a letter of reprimand which will be written by the authority (Chair, Dean, President) responsible for imposing the penalty. The letter of reprimand will be sent to the student and a copy shall be included in the record maintained by the Office of the Registrar.

Rights of Appeal
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Students must be given the right to be heard at each stage, and have the right to appeal decisions in accordance with university policy, procedures and regulations. A student may:
• appeal a decision made by the Chair to the Dean of the faculty in which the student is registered within 21 business days of the date of the Chair’s decision.
• appeal a decision made by the President under the provisions of section 61 of the University Act to the Senate Committee on Appeals in accordance with the Senate Committee on Appeals’ Terms of Reference and Procedural Guidelines.
Deans who receive an appeal of the decision of a Chair should attempt to make a finding with respect to the appeal within 21 business days. In the case of a successful appeal, any penalty will be rescinded.

Penalties

Penalties for First Academic Integrity Violation
In situations where a determination is made that a student has committed a first academic integrity violation, the following penalties will normally be imposed. The penalties for violations relating to graduate dissertations, theses or final projects are different than those for other violations.

Plagiarism
Single or multiple instances of inadequate attribution of sources should result in a failing grade for the work. A largely or fully plagiarized piece of work should result in a grade of F for the course.

Unauthorized Use of an Editor
Unauthorized use of an editor should result in a failing grade for the work. In situations where unauthorized use of an editor to extensively edit work results in a student submitting work that could be considered that of another person, penalties for plagiarism may apply.

Multiple Submission Without Prior Permission
If a substantial part of a piece of work submitted for one course is essentially the same as part or all of a piece of work submitted for another course, this should result in a failing grade for the assignment in one of the courses. If the same piece of work is submitted for two courses, this should result in a grade of F for one of the courses. The penalty normally will be imposed in the second (i.e., later) course in which the work was submitted.

Falsifying Materials
If a substantial part of a piece of work is based on false materials, this should result in a failing grade for the work. If an entire piece of work is based on false materials (e.g., submitting a commercially prepared essay as one’s own work), this should result in a grade of F for the course.

Cheating on Exams
Any instance of impersonation of a student during an exam should result in a grade of F for the course for the student being impersonated, and disciplinary probation for the impersonator (if he or she is a student). Isolated instances of copying the work of another student during an exam should result in a grade of zero for the exam. Systematic copying of the work of another student (or any other person
with access to the exam questions) should result in a grade of F for the course. Any instance of bringing unauthorized equipment or material into an exam should result in a grade of zero for the exam. Sharing information or answers for take home assignments and tests when this is clearly prohibited in written instructions should result in a grade of zero for the assignment when such sharing covers a minor part of the work, and a grade of F for the course when such sharing covers a substantial part of the work.

**Collaborative Work**

In cases in which an instructor has provided clear written instructions prohibiting certain kinds of collaboration on group projects (e.g., students may share research but must write up the results individually), instances of prohibited collaboration on a substantial part of the work should result in a failing grade for the work, while instances of prohibited collaboration on the bulk of the work should result in a grade of F for the course. In situations where collaborative work is allowed, only the student or students who commit the violation are subject to penalty.