NOTE to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course Canvas site for enrolled students and may be more current than this sample syllabus.

Course Name: Econometrics I
Course Number: ECON 423
Credits: 4
Instructor name: Mahshid Jalilvand, PhD
Instructor email: jalilvam@onid.oregonstate.edu
Instructor phone:

Course Description
Introduction to probability and statistics with an emphasis on estimation and hypothesis testing. Applications to economic models. PREREQS: MTH 241 or MTH 251 or MTH 251H

Communication
Please post all course-related questions in the General Discussion Forum so that the whole class may benefit from our conversation. Please email your instructor for matters of a personal nature. The instructor will reply to course-related questions and email within 24-48 hours. I will strive to return your assignments and grades for course activities to you within five days of the due date.

-Use "ECON423" followed by whatever else you would like to have added to it (examples: ECON423 test 5; ECON423 Ch. 4 assignment; ...) as subject for all e-mails you send to me. That way, I can identify your message, and can respond to it in a timely manner.
-Review your homework early in the week, ask questions, and give yourself and I enough time to tend to your emails/questions.
-Emails are often sent out to announce changes in the schedule or content, as well as to confirm or change due dates of assignments and exams. Check your email frequently! Announcements will also be posted on Canvas and in MyStatLab.

Course Credits
Note that this is a 4 credit hour course and is entirely online. If you had taken it in class, you would have been spending 4 hours per week in class, plus at least 2 hours of study time per class hour. Meaning at least total of 12 hours of your week needs to be spent on this course. In addition, online students need to be self-disciplined and need to be able to teach themselves by reading the instructions, the textbook, all supporting material provided through MyStatLab and Canvas.
This course combines approximately 120 hours of instruction, online activities, and assignments for 4 credits.

Technical Assistance
If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems while in your online course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the OSU Computer Helpdesk online.

For assistance with MyStatLab, contact the support listed on the MyStatLab website.

Learning Resources

- Please note that the package includes the book plus MyStatLab Access Code, both of which are required for this course.
- For textbook accuracy, please always check the textbook list at the OSU Bookstore website http://osubeaverstore.com/Academics/.
- You can also click the OSU Beaver Store link associated with the ECON 423 course information in the Ecampus schedule of classes http://ecampus.oregonstate.edu/soc/ for course textbook information and ordering.

Study guides and student resources for the text can be found at: http://media.pearsoncmg.com/aw/aw_weiss_introstats_10/cw/intro_stats_10.html

Note to prospective students: Please check with the OSU Bookstore for up-to-date information for the term you enroll (OSU Bookstore Website or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.

Canvas
Canvas & MyStatLab
This course will be delivered via Canvas and MyStatLab.

Within the course Canvas site you will interact with your classmates and with your instructor as well as accessing learning materials, such as the syllabus, class discussions, projects, and course schedule.

Within MyStatLab site, you will access the assignments, and quizzes.

To preview how an online course works, visit the Ecampus Course Demo. For technical assistance, please visit Ecampus Technical Help.

Measurable Student Learning Outcomes
Basic statistical measures
Basic probabilities
Estimations
Hypothesis testing

Evaluation of Student Performance
The final grade for this course is computed as a weighted average of discussion/participation, homework, and a final exam.

- Discussion/Participation: 10%
- Homework Average: 30%
- Exams (including Final Exam): 60%

To calculate your final grade:
Final Grade = (.60 * Total of all Exam Grades) + (.30 * HW Score) + (.10 * Dis/Par Grade)

Homework and Exams
Homework will be administered through MyStatLab and will be assigned weekly. Homework will be available Monday at 12am PST at the start of each week and due the following Sunday at 11:59pm PST. Late work will receive a grade of zero. If you need further clarification on any of these problems, post in the discussion board, or send me an email.

Homework grade is a part of final grade in this class. It should be used to learn the material, as well as to study for the exams. Feel free to post questions for your classmates on the discussion board, or to work together on assignments in person or via email. However make sure you understand and know how to solve the problems by yourself! Copying someone else’s answers will not help you with your exams.

Exams are short and will be administered on a weekly basis. You will not need a proctor for the exams.

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.9</td>
</tr>
<tr>
<td>B+</td>
<td>87-89.9</td>
</tr>
<tr>
<td>B</td>
<td>83-86.9</td>
</tr>
<tr>
<td>B-</td>
<td>80-82.9</td>
</tr>
<tr>
<td>C+</td>
<td>77-79.9</td>
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<tr>
<td>C</td>
<td>73-76.9</td>
</tr>
<tr>
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<td>70-72.9</td>
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<tr>
<td>D+</td>
<td>67-69.9</td>
</tr>
<tr>
<td>D</td>
<td>63-66.9</td>
</tr>
<tr>
<td>D-</td>
<td>60-62.9</td>
</tr>
<tr>
<td>F</td>
<td>less than 60</td>
</tr>
</tbody>
</table>

This course is offered through Oregon State University Extended Campus. For more information, contact:
Web: ecampus.oregonstate.edu   Email: ecampus@oregonstate.edu   Tel: 800-667-1465
Course Content
1. Data and statistics
   Population vs. sample, descriptive statistics vs. inference. Random sampling.
2. Univariate descriptive statistics
   N vs. n, frequency histogram, max, min, median and other quantiles, mean, range, IQR, standard deviation
3. Bivariate descriptive statistics
   Covariance, correlation
4. Basic Probability
   Sample spaces, events, rules of probability, conditional probability, independence
5. Random variables and probability distributions
   Random variable, discrete random variable, continuous random variable, Bernoulli, Binomial, Uniform and Normal distributions
6. Joint distributions
   Bivariate distribution, conditional distributions, independence.
7. Expected valued of random variables
   Expectation, variance, rules, expectations and conditional expectations for bivariate distributions
8. Sampling distributions
   Sampling distributions of mean and variance, Law of Large Numbers, Central Limit Theorem
9. Point estimates
   Unbiasedness, consistency, efficiency
10. Confidence intervals and hypothesis tests
    One-tailed, two-tailed, p-value

Course Schedule
Following are weekly course material. Each week's test is based on the assigned sections for that week.
(Weeks go from Monday at 12am to the following Sunday at 11:59 pm Pacific Time, except for the last week containing Final exam with due date of midnight Th. Dec 8)

| Week 1 | CHAPTER 1: 1.1 Statistics Basics  
          1.2 Simple Random Sampling  
          CHAPTER 2: 2.1 Variables and Data  
          2.2 Organizing Qualitative Data  
          2.3 Organizing Quantitative Data |
|--------|--------------------------------------------------------------------------------|
| Week 2 | 2.4 Distribution Shapes  
          CHAPTER 3: 3.1 Measures of Center  
          3.2 Measures of Variation  
          3.3 Chebyshev's Rule and the Empirical Rule |
| Week 3 | CHAPTER 4: 4.1 Probability Basics  
3.4 The Five-Number Summary, Boxplots  
3.5 Descriptive Measures for Populations; Use of Samples  
4.2 Events  
4.3 Some Rules of Probability |
| Week 4 | 4.4 Contingency Tables; Joint and Marginal Probabilities  
4.5 Conditional Probability  
4.6 The Multiplication Rule & Independence  
4.7 Bayes’ Rule |
| Week 5 | CHAPTER 5: 5.1 Discrete Random Variables, Probability Distributions  
5.2 Mean and Standard Deviation of a Discrete Random Variable  
5.3 The Binomial Distribution |
| Week 6 | CHAPTER 6: 6.1 Introducing Normally Distributed Variables  
6.2 Areas Under the Standard Normal Curve  
6.3 Working with Normally Distributed Variables |
| Week 7 | CHAPTER 7: 7.1 Sampling Error; the Need for Sampling Distributions  
7.2 The Mean and Standard Deviation of the Sample Mean  
7.3 The Sampling Distribution of the Sample Mean |
| Week 8 | CHAPTER 8: 8.1 Estimating a Population Mean  
8.2 Confidence Intervals for One Population Mean (σ Known)  
8.3 Confidence Intervals for One Population Mean (σ Unknown) |
| Week 9 | CHAPTER 9: 9.1 The Nature of Hypothesis Testing  
9.2 Critical-Value Approach to Hypothesis Testing  
9.3 P-Value Approach to Hypothesis Testing  
9.4 Hypothesis Tests for One Population Mean (σ Known)  
9.5 Hypothesis Tests for One Population Mean (σ Unknown) |
| Week 10 | Study, Practice, Review |
| Week 11 | Final Exam (Cumulative) Due by midnight Th. Dec 8 |

**Course Policies**

[Suggested wording is offered below for course policies on participation, missed or late exams and assignments, makeup work, etc. Feel free to edit or delete, or add your own as you wish.]

**Discussion Participation**

I may post discussion questions in the online forum. If this occurs, students are required to comment, respond, or participate in each discussion board as directed. If you have questions regarding a homework question or topic, please post in the discussion board - other students may have the same question!! **However, if you have a question that you would like me to answer, please email me.** Any assignments or quizzes outside of the weekly homework will be counted as participation points. The HW Introduction in MyStatLab will count towards Participation.

**Makeup Exams**

This course is offered through Oregon State University Extended Campus. For more information, contact:

Web: ecampus.oregonstate.edu  
Email: ecampus@oregonstate.edu  
Tel: 800-667-1465
There is no extra credit available for this class. Makeup exams will not routinely be given. All requests for re-grading must be made within 3 class days of the day the exam is returned. After that period of time, grades will be fixed and will not be changed.

**Exam Time Limits**
Exams in this class are timed; if you run short, you will only receive credit for the work which was completed during the allowed time.

**Incompletes**
Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 80% of the points possible (in other words, usually everything but the final paper). If you are having any difficulty that might prevent you completing the coursework, please don’t wait until the end of the term; let me know right away.

**Guidelines for a Productive and Effective Online Classroom**
Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university’s regulations regarding civility.

Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

**Posting of personal contact information is discouraged (e.g. telephone numbers, personal website address).**

**Observation of "Netiquette":** All your online communications need to be composed with fairness, honesty and tact. Spelling and grammar are very important in an online course. What you put into an online course reflects on your level of professionalism.

Here are a couple of references that discuss writing online: [http://goto.intwg.com/](http://goto.intwg.com/)
netiquette  http://www.albion.com/netiquette/corerules.html

**Please check the Announcements area and the course syllabus before you ask general course "housekeeping" questions (i.e. how do I submit assignment 3?).

**Statement Regarding Students with Disabilities**
Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at http://ds.oregonstate.edu. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

**Accessibility of Course Materials**
All materials used in this course are accessible.

Additionally, Canvas, the learning management system through which this course is offered, provides a vendor statement certifying how the platform is accessible to students with disabilities.

**Expectations for Student Conduct**
Student conduct is governed by the university’s policies, as explained in the Student Conduct Code.

**Academic Integrity**
Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit Student Conduct and Community Standards, or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.

b) It includes:

  i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.

  ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).

iv) TAMPERING - altering or interfering with evaluation instruments or documents.

v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Conduct in this Online Classroom
Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

Tutoring
NetTutor is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the Tools button in your course menu.

OSU Student Evaluation of Teaching
Course evaluation results are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions via ONID by the Office of Academic Programs, Assessment, and Accreditation. You will log in to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted.

NOTE: This Syllabus is Subject to minor changes which will be announced through emails and announcements.