Introduction and Overview

Welcome to ECON 2100-03, Business Statistics. My name is Yurim Lee and I will be your instructor for this course in Spring 2019. Please feel free to call me Yurim. The syllabus outlines the topics we will cover this term and the policies that will keep the course running smoothly. Over the next 11 weeks, we will learn some incredibly useful methods for summarizing data and how to use data to test hypotheses about the world.

Our textbook is OpenIntro Statistics 3rd Edition (2015) by David Diez and Mine Cetinkaya-Rundel. It’s a well-regarded open source introductory textbook that is free to download here (you can choose to pay $0.00). The textbook is easy to read, and it provides the basis for lecture slides, quizzes, and exams, so please take the time to read it. In addition to the textbook material, we will also do practical exercises using real-world data and statistical software, and you will have occasional readings from newspapers and other sources.

We have a few learning goals for this course. The first set of goals relates to your stock of theoretical knowledge. By the end of the term, you should know the standard statistical concepts and terminology. The second set of goals relates to your ability to apply this knowledge. This means using data to analyze news and form hypotheses that you can test with data. You should be able to explain to friends how you have arrived at specific conclusions using data.

Policies and Procedures

Here you’ll find all of the information that you need to succeed in this course. Please read this section carefully, and return to it often.

Attending Lectures. I strongly recommend that you attend lectures. Students who regularly attend lectures tend to perform better on exams, and exams make up most of your grade. We will
also have quizzes during class. If you do miss class, you are responsible for the material you miss and you should get notes from a fellow student.

**Reading the Textbook.** It’s often hard to remember everything that we cover in lectures, so you should reinforce lecture material by reading the textbook. Read ahead of the lecture if you can. View the textbook reading (including appendices) as essential and required for exam preparation.

**Use of Technology.** With the exception of two Microsoft Excel practice sessions, you are not allowed to use laptops, cell phones, or similar forms of technology during class. Surfing the web, texting, and other uses of technology are distracting to students and instructors alike and ultimately detrimental to the learning environment. A violation of this policy may result in appropriate grade sanctions.

**Office Hours.** I will hold office hours on T 1:30–3:30pm every week, in PIGT 516, except for the second week of April. For this week, instead of April 9th, I will hold my office hours on Thursday, April 11th (same time and place). This is the time I allocate specifically to help you succeed in this class and I suggest you make a good use of it.

**Email.** Currently I have my UW email address on the syllabus but I will update it with my SU email address once I get access. Please avoid saving your questions until the night before an exam or a quiz, because my reply might come too late to be useful. I never check Canvas messages. While I am reachable via email, it is often very difficult to explain course materials in writing. If you have questions about the course content, I strongly recommend coming to my office hours.

**Work Load.** 1 credit generally represents a time commitment of 3 hours each week in a 10-week quarter. This course has 5 credits, so expect to spend about $3 \times 5$ hours per week on this course, including time spent in class, on reading, and other studies.

**Homework.** Instead of homework, I will give in-class quizzes. See the section Quizzes for more details.

**Projects.** I will assign two projects based on statistical applications. They require you to determine which statistics are relevant, generate these statistics with Microsoft Excel, and interpret and communicate your results in a clear and professional manner to a non-technical audience. Due dates are given in the Schedule of Topics. Please submit these assignments on Canvas prior to the start of class. I cannot accept papers after our in-class discussion.

To help you with the projects, I will hold two Excel practice sessions during class. Laptops will be provided for these sessions. However, you are more than welcome to bring your own laptop.

**Quizzes.** I will have 6 in-class quizzes, given at any time on the dates scheduled. Out of the six quizzes, the best five will count towards your final grade. Quizzes may not be rescheduled for any reasons.

**Exams.** There are two exams: a midterm and a final. The midterm includes material covered up to but excluding the week of the midterm, the final includes all material. Both exams consist of a multiple choice section and a section with longer analytical problems. Notes are not
allowed unless I indicate otherwise.

**Repeating or Rescheduling Exams.** You won’t be able to repeat exams you have taken, reschedule exams you have missed, or take exams early for any reason. If you miss an exam, you’ll receive zero points on that exam. You can request exceptions in writing if your circumstances are extreme, but you’ll need to include documentation of your circumstances in your request. If you’re ill, you’ll need a letter or email from your care provider, dated the day of the exam.

**Extra Credit.** There is no extra credit for this class.

**Grading.** I post point scores on Canvas. From these point scores, I calculate final grades in two stages. In the first stage, I compute weighted percentage scores from the point scores using the following weights: Quizzes (best five) 15%, Projects 20%, Midterm 30%, Final 35%. In the second stage, I adjust weighted percentage scores to achieve a median within the target range of 2.8–3.0. Here is some information on interpreting the 4.0 grading scale.

For the adjustment, I remove outliers (observations more than twice the interquartile range from the median) from the set of weighted percentage scores, and then calculate the mean and standard deviation. I then convert weighted percentage scores into final grades on the 4.0 scale by calculating an adjustment value for each student and adding it to 2.9. The adjustment value equals a student’s point score minus the mean, divided by the standard deviation, rounded to the nearest tenth. If the final grade thus computed lies below 0.7 the student fails, and above 4.0 the student receives a 4.0. I deviate from this procedure only when necessary to achieve the department’s target median.

As an example, suppose students have the following weighted percentage scores: $\{0, 0.25, 0.50, 0.75, 1\}$. The lower quartile equals 0.25, the median 0.5, the upper quartile 0.75, and interquartile range 0.5. Outliers are scores above 1.5 or below $-0.5$, so there are no outliers. The mean is 0.5, and the standard deviation 0.4. If your point score is 3, you receive an adjustment value of 0.6, and your grade is $2.9 + 0.6 = 3.5$.

**Course Evaluations.** You can evaluate this course towards the end of the term on Canvas. Please take advantage of this opportunity. Your feedback improves my teaching and the design of the course. Evaluations are anonymous and take less than 10 minutes to complete. If over 90% of the class fills out an evaluation, you can use a $3 \times 5$-inch card with handwritten notes on the final exam.

**University Holidays.** We do not have any classes canceled due to university holidays this quarter. If you have a religious observance that overlaps with scheduled exams, please contact me in the first week of class.

**Learning Accommodations.** If you have, or think you may have, a disability (including an invisible disability such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, I encourage you to arrange support services and/or accommodations through Disabilities Services in the Learning Center, Loyola 100, (206) 296-5740. Disability-based adjustments to course expectations can be arranged only through this process.

**Misconduct.** Please review the rules for student conduct here. Academic honesty and integrity are important values at Seattle University, and academic misconduct is a serious offense against
the academic community. If I suspect academic misconduct, I will report it to department chair for disciplinary action. Acts of academic dishonesty or fraud will be addressed according to the Academic Integrity Policy.

**University Mission.** Seattle University is dedicated to educating the whole person, to professional formation, to empowering leaders for a just and humane world.
Schedule of Topics

This table gives you an overview of the dates we meet and the topics we plan to cover. It is a preliminary schedule, and I may announce occasional changes to it if we move through the material at a different pace than planned. If there are changes, I’ll announce them in class or on Canvas.

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Textbook Chapter</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>1</td>
<td>Apr 01–Apr 07</td>
<td>Tue: Course overview and Ch 1. Introduction to dataThu: Ch 1. Introduction to data</td>
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<td>2</td>
<td>Apr 08–Apr 14</td>
<td>Tue: Ch 2. Probability Thu: Ch 2. Probability</td>
<td>Quiz 1 on Thursday, Apr 11</td>
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<td>3</td>
<td>Apr 15–Apr 21</td>
<td>Tue: **Excel Practice Session 1</td>
<td>Laptops provided Thu: Ch 2. Probability</td>
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<td>4</td>
<td>Apr 22–Apr 28</td>
<td>Tue: Ch 2. Probability Thu: Ch 3. Distribution of random variables</td>
<td>Quiz 3 on Thursday, Apr 25</td>
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<td>5</td>
<td>Apr 29–May 05</td>
<td>Tue: Ch 3. Distribution of random variables Thu: Midterm exam</td>
<td>Midterm on Thursday, May 2, 2019, 3:45 – 5:50pm @PIGT 306</td>
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<td>6</td>
<td>May 06–May 12</td>
<td>Tue: Ch 3. Distribution of random variables Thu: Ch 3. Distribution of random variables</td>
<td>Project #1 due on Thursday, May 9 before class</td>
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<td>7</td>
<td>May 13–May 19</td>
<td>Tue: **Excel Practice Session 2</td>
<td>Laptops provided Thu: Ch 4. Foundations for inference</td>
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<td>8</td>
<td>May 20–May 26</td>
<td>Tue: Ch 4. Foundations for inference Thu: Ch 4. Foundations for inference</td>
<td>Quiz 5 on Thursday, May 23</td>
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<td>9</td>
<td>May 27–Jun 02</td>
<td>Tue: Ch 5. Inference for numerical data Thu: Ch 5. Inference for numerical data</td>
<td>Quiz 6 on Thursday, May 30</td>
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<td>10</td>
<td>Jun 03–Jun 09</td>
<td>Tue: Ch 5. Inference for numerical data Thu: Review for final exam</td>
<td>Project #2 due on Thursday, Jun 6 before class</td>
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<td>11</td>
<td>Jun 10–Jun 16</td>
<td>Tue: Final exam</td>
<td>Final on Tuesday, Jun 11, 2019, 4:00 – 5:50pm @PIGT 306</td>
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