Instructor: Dr. Xialu (Charlotte) Liu
Office: SSE-3359
Tel: (619) 594-1904
Email: xialu.liu@mail.sdsu.edu
Homepage: www.xialuliu.com
Office hours: Wed 4:00-5:00pm, Thur 2:00-3:00pm or by appointment

Grader: Valmik Patel
Email: valmik58@gmail.com

Prerequisite: Undergraduate level mathematical statistics and algebra courses.

Textbook:

Web: https://sites.google.com/site/ba6232016fall/

Grading:
Homework 20%
Midterm exam I 25%
Midterm exam II 25%
Final exam 30%

Overview: This course is an introduction of statistical tools and techniques. I will focus on data analysis and statistical applications, instead of mathematical formula and theories.

Expected Student Learning Outcomes:

At the end of this course students should be able to
- Use data from a sample to make inferences about a population.
- Develop strategies for problem-solving and decision-making using business analytics.
- Formulate hypotheses for decision making and research.
- Apply statistical analysis to improve managerial decision making.
- Critical evaluate statistical findings to determine their usefulness to the organization.
- Present statistical results using graphics, text, and the spoken word.
Homework

- You will be asked to engage in 5-6 homework assignments. Submitted homework should be stapled, not contain excessive erasing or too messy. Solutions without detailed explanations and remarks will not receive any credit.
- Collaboration and discussion is allowed. However, you should write up solutions individually. Do not copy from other students or sources. Homework is due before class on the due date. Late report or electronic copy is not accepted.

Exams

Usually there are no make-up exams. Exams must be taken at the scheduled time unless special arrangements are made through disabled student services, or medical emergencies. Exams outside schedule time may be harder. Exams are closed book, but a formula sheet and a calculator are allowed.

Classroom rules of conduct

- Lecture notes will be posted online. You are required to print and bring them in class or when you come to office hours.
- You will be asked to do some practice problems in class. Please bring a calculator and formula sheet. Solutions for these problems will be shown in class, but will not be given after class. Please take your own notes.

Attention Students with Disabilities

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that accommodations based upon disability cannot be provided until you have presented your instructor with an accommodation letter from Student Disability Services. Your cooperation is appreciated.

Academic Honesty

The University adheres to a strict policy regarding cheating and plagiarism. These activities will not be tolerated in this class. Any cheating or plagiarism will result in failing this class and a disciplinary review by Student Affairs. Examples of Plagiarism include but are not limited to:

- Using sources verbatim or paraphrasing without giving proper attribution (this can include phrases, sentences, paragraphs and/or pages of work)
- Copying and pasting work from an online or offline source directly and calling it your own
- Using information you find from an online or offline source without giving the author credit
- Replacing words or phrases from another source and inserting your own words or phrases
- Submitting a piece of work you did for one class to another class
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture topics</th>
<th>Chapter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>08/31</td>
<td>Introduction, descriptive statistics</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>2</td>
<td>09/07</td>
<td>Introduction of probability theory</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>09/14</td>
<td>Discrete probability distributions</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>09/21</td>
<td>Continuous probability distributions</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>09/28</td>
<td>Sampling distribution</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>10/05</td>
<td><strong>Midterm 1</strong></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>10/12</td>
<td>Confidence interval estimation</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>10/19</td>
<td>Hypothesis testing</td>
<td>9</td>
</tr>
<tr>
<td>9</td>
<td>10/26</td>
<td>Statistical inference about means and proportions with two populations</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>11/02</td>
<td>Inferences about population variances, Chi-square test of independence</td>
<td>11, 12</td>
</tr>
<tr>
<td>11</td>
<td>11/09</td>
<td><strong>Midterm II</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>11/16</td>
<td>Analysis of variance</td>
<td>13</td>
</tr>
<tr>
<td>13</td>
<td>11/23</td>
<td>Thanksgiving. <strong>No class</strong></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>11/30</td>
<td>Simple linear regression</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>12/07</td>
<td>Multiple regression</td>
<td>15</td>
</tr>
<tr>
<td><strong>Final exam</strong></td>
<td></td>
<td><strong>Time will be determined after university census</strong></td>
<td></td>
</tr>
</tbody>
</table>