EC 151.02 and EC151.03
Statistics

Syllabus

Instructor: Chuanliang Jiang
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Office Hours: MWF 10.00am-11.00am or by appointment
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Location: Carney Hall 103

Time: MWF 8:00am for EC151.02
     MWF 9:00am for EC151.03

Textbook:

Paul Newbold, William L, Carlson and Betty Throne:

Lecture:

There are three lectures per week. It is highly recommended that you should attend all of lectures discussion. Text reading for each lecture is strongly encouraged. I will try to put lecture outlines for each section on WebCT/Blackboard Vista as I figure it out.

Course Grading:

Homework: 10%  Midterm1: 30%  Midterm2: 30%  Final Exam: 30%

Exams:

There are three exams to be offered (schedule to be announced) in this semester, which cover different parts of textbook without overlapping. You are expected to attend all three exams without exception. Generally speaking, There will be no make-up exams. I will keep this policy for the whole semester without exception.

Homework

You are responsible to submit homework every other week. The homework will not
be graded, however, solution will be available the next day after submission. Undoubtedly
the homework will help you capture the essential points that we discuss in the class, which
will provide you a good exercise to prepare for the exams.

Course Structure and Objective:

This course is designed to provide an introduction to the basic level of statistic analysis. It will explore the essential tools of statistics theory and show you how to apply these
tools in the context of business and economics problem. We will study the description of
data in graphical and numerical ways, the probability theory and probability distribution
in discrete and continuous random variables. Some well-known distribution functions,
such as Binomial, Posssion and Normal distribution will be discussed in detail. We will
also discuss how to make statistical inference from hypothesis testing, how to capture
quantitatively the relationship between two random variables. Some assigned problems
will be discussed deeply as well in the class which will expose you directly to the statistics
application.

At the end of this course, you are expected to get a basic idea about how to ex-
tract the analytic information from some "raw" data set and make some conclusion in the
sense of statistician view. I hope this course will open the door for you to the further
study of statistics or its application in your future career or research. Prior knowledge
in mathematics is not required although some algebraic computation may be employed.
Mathematical tools are introduced whenever they are needed. The textbook (PWB) con-
tains well prepared exercises after the discussion of each topic. These exercises provide a
good sample for Midterm and Final Exam. Most of homework questions will come from
the textbook. Note that we will cover a fair amount of material in a very limited amount
of time. Reading every chapter carefully covering the topics discussed in the class is highly
recommended. The assigned homework questions will help you review essential points of
each topic and ensure you to keep up with the materials covered in the class.

Both midterm and final exam are close-book exams. However, a calculator will be
allowed to use. Be sure to familiarize yourself with Boston College’s academic integrity
policy at http://www.bc.edu/offices/stserv/academic/resources/policy/#integrity.
## Schedule of Topics

<table>
<thead>
<tr>
<th>Topics</th>
<th>Text Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Descriptive Statistics I</td>
<td>Ch.1(1.1-1.7)</td>
</tr>
<tr>
<td>2 Descriptive Statistics II</td>
<td>Ch.2(2.1-2.4)</td>
</tr>
<tr>
<td>3 Probability Theory</td>
<td>Ch.3(3.1-3.5)</td>
</tr>
<tr>
<td>4 Discrete Random Variables</td>
<td>Ch.4(4.1-4.4)</td>
</tr>
<tr>
<td>&amp; Probability Distribution</td>
<td>(4.6-4.7)</td>
</tr>
<tr>
<td>5 Continuous Random Variables</td>
<td>Ch.5(5.1-5.4)</td>
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<tr>
<td>&amp; Probability Distribution</td>
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<tr>
<td><strong>Midterm I  Oct 6th</strong></td>
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<tr>
<td>6 Sampling and Sampling distributions</td>
<td>Ch.6(6.1-6.4)</td>
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<tr>
<td>7 Estimation:Single Population</td>
<td>Ch.7(7.1-7.6)</td>
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<tr>
<td>Confidence Intervals</td>
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<tr>
<td>Student t Distribution</td>
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<tr>
<td><strong>8 Estimation:Additional Topics</strong></td>
<td>Chapter 8</td>
</tr>
<tr>
<td><strong>Midterm II Nov 8th</strong></td>
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</tr>
<tr>
<td>9 Hypothesis Testing</td>
<td>Ch.9(9.1-9.6)</td>
</tr>
<tr>
<td>Single Population</td>
<td></td>
</tr>
<tr>
<td><strong>10 Hypothesis Testing:Additional Topics</strong></td>
<td>Chapter 10</td>
</tr>
<tr>
<td><strong>11 Simple Regression</strong></td>
<td>Ch.11(11.1-11.4)</td>
</tr>
<tr>
<td><strong>12 Analysis of Variance</strong></td>
<td>Chapter 15</td>
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<tr>
<td><strong>Final Exam Dec 15th</strong></td>
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The schedule of topics and the construct of course may be subject to mild change during the semester, depending on the progress of lecture we have proceeded in the class.