Course description: This is a first course in probability and statistics for students in economics and business. Topics we intend to cover include: descriptive statistics, central tendencies, bivariate data, probability distribution functions, cumulative distribution functions, expectation, variance, normal and binomial distributions, sampling and sampling distributions, point estimation, properties of estimators, confidence intervals, and hypothesis testing.

Prerequisites: ECON 2a or 10a. You must earn C- or higher in MATH 10a, or otherwise satisfy the calculus requirement, to enroll in this course.

Learning goals and outcomes: Upon successful completion of this course you should be able to calculate and interpret basic descriptive statistics; understand probability distributions, cumulative distributions, expected values; calculate confidence intervals and perform hypothesis testing.

You are expected to put in 3 hours of study per week per credit outside of class in any course. As we have a condensed schedule in the summer you should expect to put in extra time to learn the material and solve the homeworks.

Readings: The primary text we shall follow is: Lane, David, M. *Introduction to Statistics (Online Edition)*

Which we shall complement, starting in the probability section, with: Readings from MIT OpenCourseWare, *Introduction to Probability and Statistics (18.05)*
Electronics in the classroom: The use of cell phones and tablets is not allowed in the classroom at any time. As our readings are electronic, laptops may be used to follow along and take notes, but not for any other activities.

Class attendance: You are expected to attend all classes, with class participation part of your grade.

Evaluation: There will be 8 homeworks, and one take-home exam, there is no final. Your lowest homework grade will be replaced by your highest score. The mid-term exam cannot be dropped. Your grade is determined on a point system in the following way, the first number is the maximum possible score, the second is the recommended A score range:

- Class participation — 30 points
- Homework Problem sets — 240 points (30 points x 8) / 200 points (25 points x 8)
- Midterm exam — 35 points / 30 points
- Total — 305 points / 260 points

Note: we have provided you plenty of extra credit opportunities, as such there is no extra-credit given at the end of the semester for a student that fails to put the effort in throughout the semester. Letter grades will determined as follows:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>&gt; 260</td>
<td>230-259</td>
<td>200-229</td>
<td>170-199</td>
<td>140-169</td>
<td>110-139</td>
<td>80-109</td>
<td>50-79</td>
<td>&lt; 50</td>
</tr>
</tbody>
</table>

Special accommodations: If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please see me immediately.

Academic honesty: You are expected to be honest in all of your academic work. Please consult Brandeis University Rights and Responsibilities for all policies and procedures related to academic integrity. Allegations of alleged academic dishonesty will be forwarded to the Director of Academic Integrity. Sanctions for academic dishonesty can include failing grades and/or suspension from the university. Citation and research assistance can be found at LTS-Library guides.