

The UNIVERSITY of NORTH CAROLINA
at CHAPEL HILL

STOR 155 Introductory Statistics

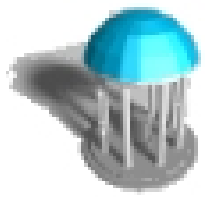
Lecture 17: Hypothesis Testing

Section 6.2



Procedures for statistical inference

- *Point estimation*
 - to estimate a parameter (quick and easy)
- *Confidence interval*
 - to estimate a parameter with measures for reliability and accuracy attached
- *Hypothesis testing*
 - hypothesis: a statement about the parameters
 - to assess whether the data provide enough evidence for some **claim** about the population



Confidence Interval

- Point estimate with margin of error
- Confidence interval for a population mean

$$\left[\bar{x} - z^* \frac{\sigma}{\sqrt{n}}, \bar{x} + z^* \frac{\sigma}{\sqrt{n}} \right]$$

- Assumption: the population variance is known
- Confidence level **C** determines z^*