I. **Sections to Read** (All content from DeGroot and Schervish's *Probability and Statistics* unless otherwise noted) A digital copy of the textbook is available for on our class PWeb site, under the Day One Access tab.

   (a) Sections 8.4

II. **Objectives** (By the end of the day's class, students should be able to do the following:)

- Give the definition of the t distribution and explain its relationship with a sample from a Normal population.
- Calculate the formula for the PDF and CDF of the t distribution, and use the formula to estimate information about a population based on a sample.

III. **Reflection Questions** (Submit answers on Gradescope `https://www.gradescope.com`)

1) What is meant when we say the t-distribution has "heavier tails" than the Normal distribution?
2) The sample mean $\bar{X}$ is both a consistent and an unbiased estimator for the population mean μ from a Normal population $N(\mu, \sigma^2)$. What do we gain from the t-statistic U introduced in Theorem 8.4.2?

IV. **Additional Feedback** Are there any topics you would like further clarification about? Do you have any additional questions based on the readings / videos? *If not, you may leave this section blank.*