

# Department of Information Systems and Technologies

## CTIS 365: Applied Data Analysis

Semester: SPRING 2022-2023

### Lab Guide #6

<b>OBJECTIVES:</b> Probability (pnorm, dnorm)
<b>Instructor:</b> Asst. Prof. Dr. Seyid AMJAD ALI
<b>Assistant:</b> Leyla SEZER

- Q1.** Find each of the following probabilities for a normal distribution.
- a.  $p(z > 1.05)$
  - b.  $p(z > -0.40)$
  - c.  $p(z < 0.20)$
  - d.  $p(z < -1.20)$
- Q2.** For a normal distribution with a mean of  $\mu = 40$  and a standard deviation of  $\sigma = 9$ , find the proportion of the population corresponding to each of the following.
- a. Scores greater than 55.
  - b. Scores less than 35.
  - c. Scores between 50 and 70.
- Q3.** Sat verbal scores are normally distributed with mean of 420 and a standard deviation of 65.
- a. What percentage of students score less than 350?
  - b. What percentage of students score between 350 and 500?