**Colorado Technical University**

**Course:** MATH366 – Probability and Statistics

**Unit 2 Part 03 Readings: Frequencies, Fractiles, IQR**

**Frequency** - the number in a class

**Relative frequency** - class frequency / sample size, provide a percentage for each class

**Cumulative frequency** - how many observations occur in this class and any

previous classes (requires classes of at least ordinal-level data

cum freq = Σ frequencies in this class & all previous classes

**Ogive** - graph of the cumulative frequency

**Fractiles**

measure of position

based on the ogive (cumulative frequency)

order the data

divide the data into the # of pieces you want, each with an equal # of members

tercile – three pieces, 2 “spacers”

the two “spacers” are the “tercile values” you want to know

quartile - four pieces, 3 “spacers”

find the median, then find the median of each piece on either side of the median

the quartiles are called “Q1, Q2, Q3

decile – 10 pieces, 9 “spacers”

percentile – 100 pieces, 99 “spacers”

**median** – the middle value in an ordered data set (or the 5th decile or 2nd quartile or the

50th percentile)

For values between two data points, take the average or weighted average

**Interquartile range**: Q3-Q1

Also called the "**IQR**"

**Five number summary:** minimum, first quartile, median, third quartile, and maximum