**Colorado Technical University**

 **Course:** MATH366 – Probability and Statistics

#### Unit 1 Part 02 Readings: Graphs

**Graphs**

Always graph your data

(or the statistics demons will get you…!)

**Graphs for categories (qualitative):**

**Bar/column chart**

use when you want to show a pattern for counts in different categories or

specific values for the categories

**Types of bar charts:**

**Dot plot** (automatic graph)

**Pareto chart** - a bar graph where the height of the bar is the frequency or

relative frequency of each category arranged from highest to lowest

**Stem and leaf plot:**

 the stem is usually the leftmost digits

 the leaf is the rightmost digit (the "ones")

 still contains the original data values

**Pie Chart** - the angle *θ* for each category of the pie is:

360º  rel freq of category

 Excel does a good job with these

**Graphs for measurements (quantitative):**

**Scatter plot** - requires paired data

 you don't split the data into classes or categories

**Time series plot -** the *x*-axis variable is "time"

**Types of Graphs:**

**Stem and leaf plot:**

 the stem is usually the leftmost digits

 the leaf is the rightmost digit (the "ones")

 still contains the original data values

**Dot plot** (automatic graph)

**Pie Chart** - the angle *θ* for each category of the pie is:

360º  rel freq of category

 Excel does a good job with these

**Pareto chart** - a bar graph where the height of the bar is the frequency or relative

frequency of each category arranged from highest to lowest

**Scatter plot** - requires paired data

 you don't split the data into classes or categories

**Time series plot -** the *x*-axis variable is "time"