

- **Sampling Methods**

Some of the sampling methods you should be aware of include:

- **Simple Random Sampling**

Selection of any one object occurs at random. No one item or person, or group of persons or items, is selected beforehand and all have an equal chance of being included in the sample.

- **Systematic Random Sampling**

Systematic random sampling takes k^{th} item from a list.

- **Sampling Error**

The difference between the sample statistic and the population parameter is called the sampling error.

Sampling error – difference between statistic and parameter	
Statistic	Parameter
$\bar{x}$	μ
s^2	σ^2
s	σ

- **Sampling Distribution of the Sample Mean**

A sampling distribution of the sample mean is a listing of all possible sample means that can be generated from a sample size of n .

- **The Central Limit Theorem**

The central limit theorem states that a sampling distribution of the sample mean can be approximated by a normal distribution. The larger the sample size these, the closer to a normal distribution the sampling distribution becomes.

- **Computing a z Score from a Sample Mean:**
$$z = \frac{\bar{x} - \mu}{\sigma/\sqrt{n}}$$

- **Standard error of the mean:**
$$z = \frac{\bar{x} - \mu}{\sigma/\sqrt{n}}$$