

STAT 110 –

Chapter 4 Definitions

Population size does not affect confidence interval width significantly as long as the population is at least 100 times larger than the sample.

sampling errors – errors caused by the act of taking a sample
→ They cause sample results to be different from the results of a census.

random sampling error – results from chance selection in the simple random sample

sampling frame – a list of individuals from which we will draw our sample
→ should list every individual in the population

undercoverage – occurs when some groups in the population are left out of the process of choosing the sample

nonsampling errors – errors not related to the act of selecting a sample from the population
→ can even be present in a census

Multistage sample – used to select a sample, in stages, from a very large population where certain groups and subgroups are available

Cluster Sample - Divide population into clusters. Select one or more clusters and include everyone in those clusters in the sample.

Systematic Sample - Take every n th item from the sampling frame.

Stratified Random Sample –

Step 1 – Divide the sampling frame into groups of individuals called strata. The strata are chosen using some characteristic of the individuals already known and of special interest. Examples – race, gender, location

Step 2 – Take a separate SRS in each stratum and combine these to make up the stratified random sample.

Probability Sample – a sample chosen by chance

A sample chosen in such a way that we know what samples are possible and what chance, or probability, each possible sample has to be chosen (not all need be equally probable).