

* Parametric vs. non-parametric statistics tests
* Significance: Statistical vs. clinical significance
* Vital Statistics: Death Rates and Ratios, Measures of Fertility and Morbidity, Person-Time data (Survival Analysis)
* How biostatistical and quantitative data are presented in medical research articles/journals
* Safety and Clinical Considerations in a Clinical Trial
* How to read and understand original scientific literature (Biomedical Journals)
* How research design influences the analysis of quantitative data

Students will utilize a number of different learning strategies to examine:

* The role of biostatistics in decision making within health sciences, biomedical studies, and society as a whole.
* Probability Concepts, Probability Distributions and Random Variables, The Bayesian Alternative (Credible Intervals)
* Screening Tests, Sensitivity, Specificity, Relative Risk, Odds Ratio, and other techniques for Epidemiology Studies
* Sampling Distributions and Estimation (Confidence Intervals)
* Regression Models
* The Chi Square Distribution and Analysis of Frequencies
* Design and Analysis of Experiments

**Prerequisite:** One university-level Statistics course

**Lecture:** Tuesday/Thursday 3:05-4:20
**Lab:** Thursday 4:30-5:20
**Instructor:** Olu Awosoga

**SPRING 2016**

BIOSTATISTICS

HLSC 4850