BIOSTATISTICS MINOR

Students in this program will apply their quantitative, computing and biological knowledge to problems in biomedical research, statistical genetics, and bioinformatics. Students with biostatistical training are in high demand in a wide array of fields such as medical research, technology companies, pharmaceuticals, genetics, public health, and epidemiology to name a few.

Related Programs

Minor

- Bioinformatics Minor (https://catalog.luc.edu/undergraduate/arts-sciences/bioinformatics/bioinformatics-minor/)
- Biology Minor (https://catalog.luc.edu/undergraduate/arts-sciences/biology/biology-minor/)
- Statistics Minor (https://catalog.luc.edu/undergraduate/arts-sciences/mathematics-statistics/statistics-minor/)

Curriculum

Code	Title	Hours
Required Courses		
Select one of the following:		6-8
MATH 161 & MATH 162	Calculus I and Calculus II	
MATH 131 & MATH 132	Applied Calculus I and Applied Calculus II	
BIOL 101 & BIOL 111	General Biology I and General Biology I Lab	4
BIOL 102 & BIOL 112	General Biology II and General Biology II Lab	4
STAT 335	Introduction to Biostatistics [1]	3
or STAT 203	Introduction to Probability & Statistics	
STAT 336	Advanced Biostatistics	3
Select one of the following:		3
STAT 303	SAS Programming and Applied Statistics	
STAT 308	Applied Regression Analysis	
STAT 337	Quantitative Methods in Bioinformatics	
Total Hours		**23-25**

[1] STAT 335 Introduction to Biostatistics recommended unless you are in a major requiring STAT 203 Introduction to Probability & Statistics.

Learning Outcomes

- Students will understand and be able to explain key components of research design and statistical analysis, including observational studies, clinical trials, and survey studies, while highlighting potential biases in non-randomized studies.
- Students will recognize appropriate statistical techniques for different types of data and apply them effectively, in particular to data coming from biology.
- Students will utilize statistical software proficiently to implement various statistical methods and techniques for data analysis, encompassing parametric, nonparametric, and modern statistical approaches.