



Indian Institute of Science

Department of Bioengineering



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Course Title: Statistics for Bioengineers

Course Code: BE 229

Couse Schedule: January Semester

Credits: 1:0

Course Instructor: Siddharth Jhunjunwala and Narendra Dixit

Pre-Requisites:

1. Undergraduate level course in probability and statistics or biostatistics; OR
2. DB-201 (Mathematics and Statistics for Biologists)

Description

The goal of this course is to introduce students to the basic concepts and tools of statistics, which is essential to analyse data generated by the medical, biological, and bioengineering community. The following topics will be covered: introduction to descriptive statistics, discrete and continuous probability distributions, estimation, hypothesis testing including students 't' test, ANOVA, and non-parametric tests. Problems will be presented and solved using R.

References

There is no prescribed textbook for this course. But the following reference texts are suggested:

1. Fundamentals of Biostatistics, Bernard Rosner

Course Outcomes

Upon completion of the course, students will be able to:

1. Appreciate the contributions of statistics to data analysis.
2. Apply the right hypothesis testing tools to different forms of data.