

The Department of Mathematics

2023–24–B term

Course Name Introduction to Statistics A

Course Number 201.1.9421

Course web page

<https://www.math.bgu.ac.il/en/teaching/spring2024/courses/introduction-to-statistics-a>

Lecturer Dr. Matan Ziv-Av, <matan@post.bgu.ac.il>, Office מִינוֹס 123

Office Hours <https://www.math.bgu.ac.il/en/teaching/hours>

Abstract

Requirements and grading¹

Course topics

- .1 Descriptive statistics: organizing, processing and displaying data.
- .2 Sampling distributions: Normal distribution, the student t-distribution, Chi-Square distribution and Fisher's F-distribution.
- .3 Estimation: A point estimate and Confidence Interval of population parameters: Mean variance and proportion. Tolerance interval.
- .4 Testing hypothesis about a population's parameters: Mean, variance and proportion.
- .5 Evaluating the properties of a statistical test: errors, significance level and power of a test.
- .6 Testing hypothesis about equality of variances, equality of means and equality of proportions of two populations.
- .7 Testing for independence of factors: Normal and Chi-Square methods.
- .8 Testing for goodness of fit of data to a probabilistic model: Chi-Square test.
- .9 Linear regression: Inference about the utility of a linear regression model. Covariance and correlation coefficient. Confidence and prediction intervals.
- .10 Weibull distribution: estimating the distribution's parameters

¹Information may change during the first two weeks of the term. Please consult the webpage for updates