

Biostatistics

Course Description

By : Dr. Ibrahim AL-Jaafari

Reference : Prem S. Mann 1998, Introductory Statistics, 7th edn, New York, USA

Week 1

- **Introduction to Bio-Statistics.**
- **Types of Statistics (Descriptive & Inferential)**
- **Basic Terms**
- **Types of Variables (Quantitative & Qualitative)**

Week 2

Organizing and Displaying Data

- **Organizing and Graphing Quantitative Data**
- **Frequency Distributions**
- **Relative Frequency and Percentage Distribution**
- **Graphical Representation of Quantitative Data**

Week 3

Organizing and Displaying Data

- **Organizing and Graphing Qualitative Data**
- **Frequency Distributions**
- **Relative Frequency and Percentage Distribution**
- **Graphical Representation of Qualitative Data**

Week 4 & 5

Descriptive Statistics

- Measures of Central Tendency of Data
- Mean , Median and Mode

Week 5 & 6

Descriptive Statistics

- **Measures of Dispersion of Data**
- **Range**
- **Variance and Standard Deviation**
- **Population Parameters and Sample Statistics**

Week 6 & 7

Descriptive Statistics

- Mean – Variance – Standard Deviation for Grouped Data
- Measures of Position (Quartiles and Interquartile range)

Week 8

Inferential Statistics

- **Hypothesis Tests About The Mean**
- **Estimation of The Mean**

Week 9

Midterm Exam

Week 10

- **Estimation and Hypothesis Testing : Two Populations**
- **t-Test for Independent Groups**

Week 11

- **Analysis of Variance (One Way Analysis of Variance)**
- **Correlation and Association Between Variables**

Week 12

- **Simple Linear Regression**
- **Multiple Linear Regression**

Week 13

- **Non-Parametric Test**
- **The Chi-Square Tests**
- **Mann-Whitney U Test**
- **Kruskal-Wallis Test**

Week 14

- **Revision and Final Exam Preparation**

Week 15

- **Final Exam - Practical**

Student Assessment

- **Coursework Assignments : (10 %)**
- **Midterm Exam Theory : (20 %)**
- **Midterm Exam Practical : (10 %)**
- **Final Exam Practical : (20 %)**
- **Final Exam Theory : (40 %)**

Good Luck for All Students

- Please do not hesitate to contact me if you have any questions.
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سبحان الله وبحمده سبحان الله العظيم

ذكر الله أعظم ما في الوجود ،، لعل الله يرحمنا بعلم تعلمناه في الحياة
الدنيا

أستغفر الله