



Department of Soil and Water

**College of College of Agriculture Engineering
Sciences Salahaddin University- Erbil**

Subject: Principle of Statistics

**Course Book (Theoretical + Practical) First Year
Students of First Group.**

Lecturer's name Dr. Kazhin Sarbaz Rajab

Academic Year: 2022/2023



Course Book

1. Course name	Principle of Statistics
2. Lecturer in charge	Dr. Kazhin Sarbaz Rajab
3. Department/ College	Group 1 of First Years
4. Contact	Kazhin.rajab @su.edu.krd Tel: 009647507992635
5. Time (in hours) per week	Thursday 10: 30am-12: 30pm
6. Office hours	Daily from 8:30 to 2:00
7. Course code	
8. Teacher's academic profile	My name is Kazhin Sarbaz Rajab and graduated from college of Agriculture/ soil and water /2009-2010. My master's degree is water chemistry 2015, I finished PhD degree in 2022 at Salahaddin University in water chemistry. I have a number of articles published in national and international journals. I have 9 years teaching experience for different soil subjects.
9. Keywords	Principle of Statistics, Variable, Data Collection, Data presentation, Statistical Measures.
10. Course overview:	A course dealing with statistical concepts including measures of central tendency and dispersion, probability distributions, the Central Limit Theorem, Sampling, Estimation, Hypothesis testing, Analysis of Variance, Correlation and Regression analysis, Multiple Regression and Statistical Forecasting.
11. Course objective:	The objective of this course is to provide an understanding for the graduate agriculture students on statistical concepts to include measurements of location and dispersion,

probability, probability distributions, sampling, estimation, hypothesis testing, regression, and correlation analysis, multiple regression and business/economic forecasting.

12. Student's obligation

The student must have an important role:

- 1- Lecture and Lab attendance are compulsory.
- 2-The students must contribute in the scientific discussions in the class or teaching hall.
- 3-The students must know the importance of quizzes, homework, reports and exams.

It is necessary to contribute the student in presenting a scientific subject

13. Forms of teaching

There are different forms of teaching:

- 1-Datashow and power point.
- 2- White board.
- 3-Lectures.

14. Assessment scheme

The course degree was divided as follow %50 of monthly exam, %15 for theoretical part 35% for practical part in theoretical part 5 marks for the first exam, 5 marks for second exam, 5 marks for daily quiz and preparing reports

Final exam takes %50 marks for theory part only

15. Student learning outcome: By completing this course the student will learn to perform the following:

- 1) How to calculate and apply measures of location and measures of dispersion -- grouped and ungrouped data cases.
- 2) How to apply discrete and continuous probability distributions to various business problems.
- 3) Perform Test of Hypothesis as well as calculate confidence interval for a population parameter for single sample and two sample cases. Understand the concept of p-values.
- 4) Learn non-parametric test such as the Chi-Square test for Independence as well as Goodness of Fit.
- 5) Compute and interpret the results of Bivariate and Multivariate Regression and Correlation Analysis, for forecasting and also perform ANOVA and F-test. Further, understand both the meaning and applicability of a dummy variable and the assumptions which underline a regression model. Be able to perform a multiple regression using computer software.

16. Course Reading List and References:

1. North Dakota Agricultural Statistics (current issue)

http://www.nass.usda.gov/Statistics_by_State/North_Dakota/Publications/Annual_Statistical_Bulletin/index.asp

2. The North Dakota Department of Agriculture's Agricultural Brochures (1998 to current year's issue)

<http://www.agdepartment.com/statistics.html>

3. NDSU - ND Agricultural Experiment Station - Central Grasslands Research Extension Center - Annual Report <http://www.ag.ndsu.nodak.edu/streeter/streeter.htm>

4. Grazing Land Economics Made Simple - Understanding Internal Rate of Return and Net Present Value <ftp://ftpfc.sc.egov.usda.gov/GLTI/technical/publications/economicsimple.pdf>

5. The Value of Crop Residue <http://www.oznet.ksu.edu/library/crpsl2/mf2604.pdf>

<p>6. Farm Machinery Economic Cost Estimates for 2005, distributed by University of Minnesota Extension Service http://www.extension.umn.edu/distribution/businessmanagement/DF6696.pdf</p> <p>7. Economics: Partial Budgeting no. 3.760 http://www.ext.colostate.edu/pubs/farmmgmt/03760.html</p> <p>8. Economics: Partial Budgeting Form no. 3.761 http://www.ext.colostate.edu/pubs/farmmgmt/03761.html</p> <p>9. Interpretation & Use of the Amortization Table www.oznet.ksu.edu/library/agec2/mf489.pdf</p> <p>10. Important Farm Business Terms Defined http://www.oznet.ksu.edu/library/agec2/mf477.pdf</p> <p>11. Plotting a Course: Short-Term and Long-Term Agricultural Planning Prices for NorthDakota http://www.ext.nodak.edu/extpubs/agecon/market/ec1090w.htm</p>	
17. The Topics:	Lecturer's name
<p>1st week Introduction to statistics, Descriptive & Inferential Statistics: Definition, Differences & Examples</p> <p>2nd week Difference between Populations & Samples in Statistics</p> <p>3rd week Defining the Difference between Parameters & Statistics</p> <p>4th week Estimating a Parameter from Sample Data: Process & Examples</p> <p>5th week First Test</p> <p>6th week What is Quantitative Data? - Definition & Examples</p> <p>7th week Discrete & Continuous Data: Definition & Examples</p> <p>8th week Nominal, Ordinal, Interval & Ratio Measurements: Definition & Examples</p> <p>9th week Confounding Variables in Statistics: Definition & Examples</p> <p>10th week Second Test</p> <p>11th week Hypothesis testing</p> <p>12th week Chi-square tests</p> <p>13th course review</p>	<p>Lecturer's name Dr. Kazhin Sarbaz Rajab ex: (2 hrs)</p>
18. Practical Topics (If there is any)	
<p>There are three main and important skills the students should learn, which are M. PowerPoint , M. Excel and M. Word that led them dealing with computer and internet</p>	<p>Lecturer's name ex: Shiraz Abdulkhaliq Abdullah (3-4 hrs)</p>
19. Examinations:	
1. Compositional:	
1-Definition?	

- 2-explanation?
- 3- What are the differences between A and B?
- 4- Fill-in the blanks?

2. True or false type of exams:

20. Extra notes:

21. Peer review پېداچوونھوھى ھاوھل

The Course schedule is tentative and may be subject to change