


## Food Technology Department

College of Agricultural Engineering Sciences
Salahaddin University - Erbil
Subject: Experimental Design
Course Book - (Second Year)
Lecturer's name Dr. Rebin Aswad Mirza (Theory)
Mr. Azad Shamsaddin (Practical)
Academic Year: 2022-2023

## * Course Book

| 1. Course name | Fall course |
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| 2. Lecturer in charge | Theory: Dr Rebin Aswad Mirza and Assist Prof Dr Khalid <br> Ismail Aziz <br> Practical: Mr. Azad Shamsaddin Salih |
| 3. Department/ College | Animal Resource Department / Agriculture College <br> e-mail: rebinaswed@yahoo.com <br> rebin.mirza@su.edu.krd <br> azad.salih2@su.edu.krd |
| 4. Contact | Tel: (optional) 07504703477 |
| 5. Time (in hours) per week | Theory: 2 <br> Practical: 3 |
| 6. Office hours | -- <br> 7. Course code <br> 8. Teacher's academic <br> profile <br> Theory: <br> and Technology at the University of Plymouth in the UK. <br> I have MSc Degree in Poultry Production and Technology in <br> 2008 at Salahaddin University. I have got a BSc in 2003 in <br> Animal Resources Agriculture College Salahaddin University |
| - Erbil, Kurdistan Region of Iraq. I employed in 2003 at the |  |
| Animal Resources Department in Agriculture College. In 2010 |  |
| I started to work as a Lecturer in Animal Resources |  |
| Department and gave a lecture to undergraduate students |  |
| and now to the postgraduate students. Now, I am a head of |  |
| Fish Resources and Aquatic Animals department. |  |

A course dealing with statistical and how to setup design for their experiment, including measures of central tendency and dispersion, the Central Limit Theorem, Sampling, Estimation, Hypothesis testing, Analysis of Variance, Correlation and Regression analysis, Multiple Regression and Statistical Forecasting and the design that use in this course.

- The importance of studying the subject
- Understanding of the fundamental concepts of the course
- Principles and theories of the course
- A sound knowledge of the major areas of the subject
- Sufficient knowledge and understanding to secure employment

This should not be less than 200 words

## 11. Course objective:

This should not be less than 100 words
Students will be introduce to the basic principles of data analysis and be able to collection data from an experiment. Identify and describe some design to analyse data. By completing this course the student will learn to perform the following: 1) How to analyse data by applying suitable design to calculate data and how to test this data to find a significant differences between treatment in the appreciate design. Understand the concept of p-values.

## 12. Student's obligation

In this section the lecturer shall write the role of students and their obligations throughout the academic year, for example the attendance and completion of all tests, exams, assignments, reports , essays...etc
The role of students in the class should attend to the class weekly and I will put some points on it, every week I will do quiz for them and students participate in the class is very important.

## 13. Forms of teaching

 سمارنبوّرد يان مـلز همها... هتد
We need to write all information on white board to clarify it. Sometimes I use the projector to display my objectives by power point, I will give all my objectives on the word paper to my students.

## 14. Assessment scheme

Breakdown of overall assessment and examination



First Exam after five lectures
Second Exam after ten lectures.
Mark Distribution:
Monthly Exam 50\% (Theoretical 15\% + Practical 35\%)

| Final Exam | $50 \%$ (Theoretical) |
| :--- | :--- |
| Final Mark | $100 \%$ |

15. Student learning outcome:

This should not be less than 100 words
The objective of this course is to provide an understanding for the graduate business student on Experimental concepts includes Complete randomized design, Randomized Complete Block Design, Latin Square Design and Factorial Design.

## 16. Course Reading List and References:

- Key references:
- Useful references:
- Magazines and review (internet):
- Kirk, P. (2013) Experimental Design. Fourth Edition. Sage publication, United Kingdom.
- Thomas, P. R. (2007) Modern Experimental Design. John Wiley and Sons. Printed in United State of America.

| 17. The Topics: Theory | Lecturer's name |
| :---: | :---: |
| In this section the lecturer shall write titles of all topics he/she is going to give during the term. This also includes a brief description of the objectives of each topic, date and time of the lecture <br> Each term should include not less than 16 weeks <br> The titles of the objects will be the following: <br> Introduction to statistics <br> Introduction of experimental design <br> Complete Randomized Design <br> Equal and unequal CRD <br> Different type of test <br> Dunnet $t$ test and Isd test <br> Duncan test <br> Randomized Complete Block Design <br> Latin Square Design <br> Factorial Design <br> Two and three factor with CRD and RCBD | Lecturer's name <br> Dr Rebin Aswad Mirza <br> And Dr Khalid Ismail <br> ex: (2 hrs) $26 / 1 / 2023$ |
| 18. Practical Topics (If there is any) |  |
| In this section The lecturer shall write titles of all practical topics he/she is going to give during the term. This also includes a brief description of the objectives of each topic, date and time of the lecture <br> Introduction to statistics Introduction of experimental design | Lecturer's name ex: (3 hrs) <br> Mr. Azad Shamsaddin ex: 24/1/2023 <br> Computer application by Excel and SPSS |

Ministry of Higher Education and Scientific research

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Complete Randomized Design
Equal and unequal CRD
Different type of test
Dunnet t test and Isd test
Duncan test
Randomized Complete Block Design
Latin Square Design
Factorial Design
Two and three factor with CRD and RCBD
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19. Examinations:
20. Compositional: In this type of exam the questions usually starts with Explain how, What are the reasons for...?, Why...?, How....?
With their typical answers
Examples should be provided

## 2. True or false type of exams:

In this type of exam a short sentence about a specific subject will be provided, and then students will comment on the trueness or falseness of this particular sentence. Examples should be provided

## 3. Multiple choices:

In this type of exam there will be a number of phrases next or below a statement, students will match the correct phrase. Examples should be provided.

## 20. Extra notes:

Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.

## 21. Peer review <br> بَّيّاجپوونـهوهى هاوهل

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.
(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).

