Department of Statistics and informatics

College of Administration and Economics

Salahaddin University-Erbil

Subject: Econometrics

Cores Book – Second Semester – fourth stage (4)

Lecturer's name: Dr. Paree khan Abdulla Omer

Academic Year: 2022-2023

Course Book

1. Course name	Processing Econometrics problems
2. Lecturer in charge	Paree khan Abdulla Omer
3. Department/ College	Statistics and informatics / Administrations and Economics
4. Contact	e-mail: paree_darbandy@yahoo.co.uk Tel: 07504702219
5. Time (in hours) per week	Theory: 2 Practical: 0
6. Office hours	Sunday // 8:30–10:30 /10:30–12:30 / 12:30-2:30
7. Course code	
8. Teacher's academic profile	I have earned a M.Sc. in (2006-2007) and Ph.D. in (2012-2013) of Statistics from Administrations and Economics at Salaheddin University in Erbil. I have been teaching in Statistics department at Sallahddin University since 2006-2007. I have taught Decision Theory in 2012-2013, Regression Analysis in 2013-2014, 2014-2015, 2018-2019 and econometrics in 2016-2017, 2017-2018, 2019-2020, 2020-2021and 2021-2022. I am currently teaching Econometrics and doing researches as well. My main research areas lie in Statistics and spatial statistics, with particular emphasis on Regression and time series, factor analysis and spatial analysis.
9. Keywords	The concept of Econometrics, Methodology of econometrics, Simple and multiple linear econometrics model, The General Linear econometrics model, Autocorrelation, Multicollinearity, Heteroscedasticity.

10. Course overview:

The general purpose of second course is to study the basic concepts of problem of econometrics models; this course includes the all problems and how we can know, what are their sources of these problems, testing, estimating and processing each problem by some tools.

11. Course objective:

Econometrics is a set of models used to estimate the relationships among economics variables, using sample data to understand or construct the future by modelling and analysing the data and answer questions or to draw conclusions about a population.

12. Student's obligation

Students have the right to participate in course examinations and other assessed performances. Examination frauds and copying of assignments or material are not allowed. Students are anticipated to attend classes and to submit assignments on the due date. Students are also expected to participate in tutorials. Students have representatives in the groups they can come to meetings to show their support; they have the right to report incidents of discrimination.

13. Forms of teaching

the teacher usually uses different ways to reaching the main objectives and in order to take the advantage and try to use the theories and connecting them with reality in order to delivery information to the students easily (access to the scientific purpose of the article), using the following means: -

The display through the use of software (Power Point Presentation) where the offer includes the following aspects: -

1. The basic address and subsidiary subjects required.

2. The definitions and basic notes.

3. Shapes and graphs

14. Assessment scheme

Allocation of degree examinations as follows: -

1) 40-degree of yearly seek (20 per exam)

The first course: (15) degree to action examination (mid-term).

                           (5) degree to activity & conducting quiz.

The second course: (15) degree to action examination (mid-term).

                           (5) degree to activity & conducting quiz.

2) 60-degree final exam (first round or the second)

15. Student learning outcome:

At the end of this course, students are expected to be confidence from analyzing the relationships between all factors that related together in the reality. They will be able to formulate the modeling the relation and distinguish the type of relation and analyzing with interpreting the consequences after that make decisions.

The students should have the ability to work in both public and private sectors as having good skills in analyzing.

16. Course Reading List and References:

- Basic econometrics, fourth edition, Damodar N. Gujarati, 2003.
- Introduction to Regression and Data Analysis, Dan C. and Sherlock C. , 2008.
- Problems with Econometric Models, Kiula , M. and Namusonge, G. S. , 2014.
- Liner Regression, K.F. Turkman,1998.
- Magazines and review (internet): many of papers ….

17. The Topics:	**Lecturer's name**
Chapter Two // Week -1- The definition of autocorrelation problem. Week -2- The Reasons or Sources of Autocorrelation problem. Week -3- Estimating and testing under the first order autoregressive process. Week -4- The consequences and Processing of autocorrelation. Week -5- examples Week -6- The definition of multicollinearity problem. Week -7- The Reasons or Sources of multicollinearity problem. Week -8- Methods for Detecting Multicollinearity. Week -9- Consequences and Processing of multicollinearity problem. Week -10- examples. Week -11- The definition of heteroscedasticity. Week -12- The Reasons or Sources of heteroscedasticity problem. Week -13- Test the heteroscedasticity problem. Week -14- Consequences and processing of heteroscedasticity problem. Week -15- examples.	Dr. Paree khan A. Omer
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	

19. Examinations:

1. 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:

Are these sentences (True) or (False) and correct the false sentences.

1. In OLS $R^2 = r^2$ when an estimated intercept $\hat{\beta}_0$ none exist.

2. When all point y_i lie on the straight line $\hat{y}_i$, then $y_i \neq \hat{y}_i$.

3. SSR denoted the unexplained variation, SSE can be thought as the 'explained' variation, The SST represents the total variation of the dependent variable.

4. Children's age and the number of words in their vocabulary is the negative correlation.

5. Usually R^2 less than R^{*2} because MSE for the model in which the intercept exists less than MSE for the model that not content on the intercept.

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**

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).