مركز الاعتماد وضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER

Course Syllabus

1	**Course title**	Agricultural Econometrics
2	**Course number**	605450
3	**Credit hours**	3
	Contact hours (theory, practical)	(3,0)
4	**Prerequisites/corequisites**	Agricultural statistics
5	**Program title**	**Bachelor in Agricultural Economics & Agribusiness**
6	**Program code**	
7	**Awarding institution**	The University of Jordan
8	**School**	**Agriculture**
9	**Department**	**Agricultural Economics & Agribusiness**
10	**Course level**	**fourth year**
11	**Year of study and semester (s)**	**First semester 2021/2022**
12	**Other department (s) involved in teaching the course**	**None**
13	**Main teaching language**	English
14	**Delivery method**	✓Face to face learning ☐Blended ☐Fully online
15	**Online platforms(s)**	✓Moodle ✓Microsoft Teams ☐Skype ☐Zoom ☐Others……
16	**Issuing/Revision Date**	7-10-2021

17 Course Coordinator:

Name: Dr. Mohammad Majdalawi

Contact hours: 11:00-12:00 everyday

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18 Other instructors:

Name: Office number: Phone number: Email: Contact hours: Name: Office number: Phone number: Email: Contact hours:

19 Course Description:

This course will provide an introduction to modern methods of analyzing data used in economics, business and many other social sciences. The course focuses attention on the concepts of determining the relation between different variables in the economics by building mathematical models. Nevertheless this course will explain the forecasting methodology depending on the economic, statistic and mathematic concepts. This course will cover some fundamentals of models and data, simple and multiple regression analysis, the properties of ordinary least squares analysis, problems in regression analysis and selecting the best regression equation.

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20 Course aims and outcomes:

A- Aims:

This course aims at:

1. The course aims at explaining the different methods of data analysis by using statistical and economical concept.
2. This course aims at providing the modern methods of analyzing data used in economics, business and many other social sciences.
3. To develop a knowledge and understanding of analyzing the data and choosing and testing mathematical model to explain the relationships between different variables.
4.

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

SLOs / SLOs of the course	SLO (1)	SLO (2)	SLO (3)	SLO (4)
Apply economic principles and research methods in solving economic problems and to agricultural production management.	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Be able to use econometric, statistical, and economic models as a basis for estimating key economic parameters, testing economic hypotheses, and predicting economic outcomes	Demonstrate basic knowledge on data analysis and choosing the suitable model.	
2 Analyze extension programs to deliver relevant information to farmers and employ the economic and business principles in making decisions.	using the built models in forecasting for the future	Display personal responsibility to the course requirements		
Collaborate effectively with scientists and educators in other disciplines to incorporate economic analysis into multi-disciplinary	Use appropriate econometric support tools	Create self-reliance and team work when necessary.	using the computer in his analysis	

21. Topic Outline and Schedule:

Week	Lecture	Topic	Intended Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	1.1	Introduction of the course and discussions- the learning outcomes		Face to Face		Synchronous Lecturing	Assignments and Exams	
	1.2	Introduction to econometrics, the nature of statistics, The methodology of econometrics.	Demonstrate basic knowledge on data analysis and choosing the suitable model.	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1992
	1.3	Assignments and Exercises		Online	Microsoft Teams	Asynchronous Lecturing	Assignments and Exams	
2	2.1	Measures of Central Tendency	Demonstrate basic knowledge on data analysis and choosing the suitable model.	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1992
	2.2	Measures of Dispersion	Demonstrate basic knowledge on data analysis and choosing the suitable model.	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1992
	2.3	Assignments and Exercises	Be able to use econometric, statistical, and economic models as a basis for estimating key economic parameters, testing economic hypotheses, and predicting economic outcomes	Online	Microsoft Teams	Asynchronous Lecturing		
3	3.1	Shape of Frequency Distribution	Be able to use econometric, statistical, and economic models as a basis for estimating key economic parameters, testing economic hypotheses,	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995

			and predicting economic outcomes					
	3.2	Test of hypothesis - Parametric tests (Z- & t-tests),	Be able to use econometric, statistical, and economic models as a basis for estimating key economic parameters, testing economic hypotheses, and predicting economic outcomes	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	3.3	Assignments and Exercises	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Online	Microsoft Teams	Asynchronous Lecturing		
4	4.1	Test of hypothesis - Parametric tests (Z- & t-tests),	test the significance of the parameters in the built models	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N.
	4.2	Test of hypothesis - Non-parametric tests: χ^2 test.	test the significance of the parameters in the built models	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	4.3	Assignments and Exercises	test the significance of the parameters in the built models	Online	Microsoft Teams	Asynchronous Lecturing		
5	5.1	Test of hypothesis - Non-parametric tests: χ^2 test.	test the significance of the parameters in the built models	Face to Face		Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	5.2	The two variable linear model	test the significance of the parameters in the built models	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	5.3	Assignments and Exercises	Use the econometric scientific literature effectively	Online	Microsoft Teams	Asynchronous Lecturing		
6	6.1	The two variable linear model	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Face to Face		Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	6.2	The ordinary least - square method	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	6.3	Activities	Employ analytical skills to be used for data	Online	Microsoft Teams	Asynchronous Lecturing		

			analysis					
7	7.1	Test of significance of parameter estimates	test the significance of the parameters in the built models	Face to Face		Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	7.2	Test of goodness of fit and correlation	test the significance of the parameters in the built models	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	7.3	Activities	Employ analytical skills to be used for data analysis	Online	Microsoft Teams	Asynchronous Lecturing		
8	8.1	Properties of least - squares estimators	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Face to Face		Synchronous Lecturing	Assignments and Exams	Maddala, G. S., 2001
	8.2	Using the software for analyzing the data- application by using computer.	using the computer in his analysis	Online	Microsoft Teams	Synchronous Lecturing	Exam, Quizzes and Exercises by using computer	
	8.3	Assignments and Exercises	Apply and analyze different methods of building models	Online	Microsoft Teams	Asynchronous Lecturing		
9	9.1	The three - variable model	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	9.2	Tests of significance of parameter estimates	test the significance of the parameters in the built models	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	9.3	Assignments and Exercises		Online	Microsoft Teams	Asynchronous Lecturing		
10	10.1	The coefficient of multiple determination	Use appropriate econometric support tools	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995

	10.2	Test of overall significance of regression	Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	10.3	Application by using computer	using the computer in his analysis	Online	Microsoft Teams	Asynchronous Lecturing	Exam, Quizzes and Exercises by using computer	
11	11.1	Using the software for analyzing the data- application by using computer	Use appropriate econometric support tools	Face to Face		Synchronous Lecturing	Exam, Quizzes and Exercises by using computer	
	11.2	Application by using computer	Use appropriate econometric support tools	Online	Microsoft Teams	Synchronous Lecturing	Exam, Quizzes and Exercises by using computer	
	11.3	Application by using computer	Use appropriate econometric support tools	Online	Microsoft Teams	Asynchronous Lecturing		
12	12.1	Partial – correlation coefficients	Use appropriate econometric support tools	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	12.2	Predictions	using the built models in forecasting for the future	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	12.3	Activities	Display personal responsibility to the course requirements	Online	Microsoft Teams	Asynchronous Lecturing		
13	13.1	Functional form	using the built models in forecasting for the future	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	13.2	Dummy Variables	Gain basic concepts and knowledge in data analysis and building and testing the models	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	13.3	Activities	Create self-reliance and team work when necessary	Online	Microsoft Teams	Asynchronous Lecturing		
14	14.1	Dummy Variables	Gain basic concepts and knowledge in data analysis and building and testing the models	Face to Face		Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	14.2	Application by using computer	Gain basic concepts and knowledge in data analysis and building	Online	Microsoft Teams	Synchronous Lecturing	Exam, Quizzes and Exercises by using	Gujarati, D. N., 1995

			and testing the models economy and E-marketing				computer	
	14.3	Application by using computer	Gain basic concepts and knowledge in data analysis and building and testing the models	Online	Microsoft Teams	Asynchronous Lecturing	Exam, Quizzes and Exercises by using computer	
15	15.1	Multicollinearity	Gain basic concepts and knowledge in data analysis and building and testing the models	Face to Face		Synchronous Lecturing Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	15.2	Autocorrelation	Gain basic concepts and knowledge in data analysis and building and testing the models	Online	Microsoft Teams	Synchronous Lecturing	Assignments and Exams	Gujarati, D. N., 1995
	15.3	Activities	Display personal responsibility to the course requirements	Online	Microsoft Teams	Asynchronous Lecturing		

22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Exercises	20%		Be able to discuss/ explain the importance of a wide range of models and quantitative tools	Week 10 and week 11	
Midterm Exam	30%		test the significance of the parameters in the built models	5\12\2021	
Final Exam	50%		Apply and analyze different methods of building models	As the schedule from the registration	

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform…etc):

Students should have a computer, and internet connection. Students should activate their JU accounts on the Microsoft team

24 Course Policies:

A- Attendance policies:

Each student is expected to take their own notes (part from the exam) and to attend online class. Absence from lectures shall not exceed 15%. Students are expected to attend all lectures but if a student is absent from class, it is their responsibility to get the material that was missed. You must get any handouts or notes from your classmates.

B- Absences from exams and submitting assignments on time:

Exams will consist of **multiple choice, true/false, matching, and/or fill-in-the-blank questions**. Exams will cover all material presented for each section. Make-up exams will only be provided for students with an excused absence AND supporting documentation. The questions and/or format of any make-up exam may differ from that of the original exam. Scheduling of a make-up exam will vary depending upon available dates/times but **MUST** occur before the next-scheduled exam date.

C- Health and safety procedures:

Students should follow the Jordanian government guide.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

Academic dishonesty will NOT be tolerated. This includes cheating, fabrication or falsification, plagiarism, abuse of academic materials, complicity in academic dishonesty, falsifying grade reports, and misrepresentation to avoid academic work. For this course, evidence of any form of academic dishonesty will result in all involved students receiving zero points for any associated exam, or assignment

E- Grading policy:

The results of the exams and the assignments and exercises will be given to the students, maximum one week after the exam and the right answers will be discussed with the students.

F- Available university services that support achievement in the course:

Students account on E-learning, Microsoft teams, computer room and library and study room.

25 References:

Required book (s), assigned reading and audio-visuals:

- Maddala, G. S.: Introduction to Econometrics, John Wiley & Sons, 3d ed., New York, 2001
- Gujarati, D. N., " Basic Econometrics ", 3rd ed., McGraw-Hill Company Inc., New York, 1995.
- Gujarati, D. N., " Essentials of Econometrics ", McGraw-Hill Company Inc., New York, 1992.
- Series in Economics, McGraw-Hill Book Company, New York, 1982.

Recommended books, materials, and media:

- Wooldridge , J.M. "Introductory Econometrics : A Modern approach" , 4th edition, 2009
- Salem, M. A., " Introduction to Agricultural Econometrics ", University of Jordan/ Faculty of agriculture, Amman, 1997 (in Arabic).
- Salvatore, D. "Theory and Problems of Statistics and Econometrics" , Schaum's Outline. Series in Economics, McGraw-Hill Book Company, New York, 1982.

26 Additional information:

- Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming, then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter, problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President. For final complaints, there will be a committee to review grading the final exam.

For more details on University regulations please visit: http://www.ju.edu.jo/rules/index.htm

Name of Course Coordinator: -Dr. Mohammad Majdalawi----------Signature: ------ ----------

Date: 7\10\2021

Head of Curriculum Committee/Department: ---------- Signature: ----------

Head of Department: ---------- Signature: ----------
Head of Curriculum Committee/Faculty: ---------- Signature: ----------
Dean: ---------- Signature: ----------