MAKERERE UNIVERSITY BUSINESS SCHOOL
FACULTY OF ECONOMICS, ENERGY & MANAGEMENT SCIENCE, DEPARTMENT OF
APPLIED ECONOMICS
SEMESTER II, ACADEMIC YEAR 2023/ 2024

COURSE OUTLINE

Program: Bachelor of Arts in Economics
Course: Introductory Econometrics
Course Code: ECB 1205
Year of study: I
Lecture hours per week: 4
Lecturer: Dr**.** Miria Nakamya, *Tel: 0774092739, Email: mnakamya@mubs.ac.ug*

Introduction to the course

This course is intended to introduce and familiarize students with basic concepts in econometrics, preparing them for intermediate-level econometric techniques. It emphasizes the use and interpretation of single equation regression techniques in formulating and testing microeconomic and macroeconomic hypotheses. The course starts with a brief overview of data presentation and fitting of the data focusing populations and inferences about parameters of the population before introducing classical linear regression models with topics such as: assumptions of linear regression, estimation, interpretation of the parameter estimates, goodness of fit, testing for restrictions on parameters, consequences of violation of the necessary assumptions, and forecasting. Cross-section and time series modelling as well as qualitative choice models will be covered. There will be examples of the uses of econometrics in a variety of areas through statistical analysis, problem solving and econometric estimation using a statistical computer package.

Course Objectives

Econometrics is concerned with how to use statistical methods and procedures for economic data. Econometrics techniques have been increasingly used in macroeconomics and applied microeconomics. This course is designed to provide the students with basic knowledge of statistics and econometrics necessary to understand and be able to evaluate and interpret econometrics researches that use basic linear regression methods in preparation for the main econometrics course in Year II.

Learning outcomes

At the of this course students should be able to perform simple and basic tasks of data collection, modeling of econometrics relationships, estimating and testing of the model, and interpreting and using the estimation results. Specifically, by the end of this course it is expected that the student will:

1) Be able to describe the basic principles of econometric analysis;
2) Be able to explain the fundamental techniques and wide array of applications involving linear regression estimation;
3) Be well conversant with the assumptions that underpin the classical regression model;

MUBS MISSION: To enable the future of clients through creation and provision of knowledge.
MUBS VISION: The benchmark for Business and Management Education, Research and Training in the region

4) Be able to related regression analysis to real world economic examples and data sets for hypothesis testing and prediction, and

5) Be able to recognize and make adjustments for a number of common regression problems

Course Content

NO	Topic	Sub-topics	Time Allocated	Teaching Method	Reference Materials	Lecturer
1	Overview of Econometrics	• Meaning and scope of econometrics • Econometrics and economics • Econometrics and statistics • Methodology of Econometrics • The structure of economic data • Uses of econometrics	2 weeks (8 hours)	• Q&A • Straight Lecture • Brain storming Self-Discovery/ Guided reading	Main Text Koutsoyiannis, A., *Theory of Econometrics*, 2nd Ed. Palgrane Publication, 2001. References Gujarati, D.N. and Porter, D.C. (2009): *Basic Econometrics.* 5th Edition, McGraw-Hill, New York	MN
2	Measus ring relationships between variables	• Correlation versus regression analysis • Causality and ceteris paribus • Regression Analysis: The simple regression model • Deriving least squares estimates - The Ordinary Least Square (OLS) Estimation Method	3 weeks (12 hours)	• Straight lectures • Buzz groups • Group Presentations • Quizzes • Demonstrations	Gujarati, D.N. and Porter, D.C. (2009): *Basic Econometrics.* 5th Edition, McGraw-Hill, New York References 2. Wooldridge, J. (2008): Introductory Econometrics: A Modern Approach, 4th Ed.	MN
3	Properties of OLS on any Sample of Data	• Classical assumptions of ordinary least squares (OLS) linear regression	3 Weeks	• Straight lectures • Quizz • Demonstrations	Gujarati, D.N. and Porter, D.C. (2009): *Basic Econometrics.* 5th Edition,	MN

MUBS MISSION: To enable the future of clients through creation and provision of knowledge.
MUBS VISION: The benchmark for Business and Management Education, Research and Training in the region

		• Properties of the ordinary least square estimators • Goodness of fit	(12 hours)		McGraw-Hill, New York <u>References</u> 2. Wooldridge, J. (2008): Introductory Econometrics: A Modern Approach, 4th Ed.	
4	Hypothesis testing: test of significance and other practical aspects.	• Confidence intervals for regression coefficients and hypothesis testing • The level of significance • Accepting & Rejecting Hypotheses • Regression Analysis and Analysis of Variance • Normality tests • Lab session	5 weeks (20 hours)	• Straight lectures • Quizz • Demonstrations	Gujarati, D.N. and Porter, D.C. (2009): *Basic Econometrics.* 5th Edition, McGraw-Hill, New York <u>References</u> 2. Wooldridge, J. (2008): Introductory Econometrics: A Modern Approach, 4th Ed.	MN
	Total		13 weeks			

Mode of Delivery

- Lectures method
- Question and answer
- Class discussions
- Group exercises,
- Case Studies

Assessment

- Course work will carry 30%
- Final examination   70%
- Total   100%

Reading list

1) Gujarati, D.N. and Porter, D.C. (2009): Basic Econometrics. 5th Edition, McGraw-Hill, New York
2) Koutsoyiannis, A., Theory of Econometrics, 2nd Ed. Palgrane Publication, 2001.
3) Woolridge, J.M. (2013) *Introductory Econometrics: A Modern Approach*, 5th edition, Cengage Learning.

Prepared by………………………   *Approved by……………………………*

Internal Examiner   **HoD**