

**THE UNIVERSITY OF THE WEST INDIES
ST. AUGUSTINE, TRINIDAD AND TOBAGO, WEST INDIES**

Course title:	Econometrics II
Course code	ECON3050
Course proposer:	Dr Anthony Birchwood
Course type (<i>Tick as appropriate</i>)	<input type="checkbox"/> Core <input checked="" type="checkbox"/> Elective <input type="checkbox"/> Co-curricular
Level	Undergraduate
Semester in which course will be offered:	2
Course Start Date	January 20 th , 2020
Course Provider/ Academic Unit	Economics
Credits	3
Pre/Co-requisites	*Students should have the following knowledge/competence: <ul style="list-style-type: none"> • ECON3049 – Econometrics I
Teaching Methods (list only):	Lecture Tutorials Lab Session
Estimated Study Hours	Hours/week: <ul style="list-style-type: none"> • Lectures – two(2) contact hours per week • Tutorials – two (2) contact hours per week • Lab Sessions two (2) contact hours per semester
Total no. of assessments	<ul style="list-style-type: none"> • Project accounting for 25 percent of final grade • Final Exam accounting for 75 percent of final grade
Instructor information	Lecturer (Primary) : Dr. Anthony Birchwood Office Address : Faculty Office of the Social Sciences Contact # : Ext 83852 Email Address : anthony.birchwood@sta.uwi.edu Office Hours : To be Announced Preferred method of contact : Email Lecturer (Evening) : Ms. Soleil Frederick Office Address : Contact # : - Email Address : soleil.frederick@sta.uwi.edu Office Hours : To be Announced Preferred method of contact : Email

1 COURSE OVERVIEW

1.1 Course Description

This course introduces students to advanced time series topics for analyzing data in economics and related disciplines. Extensions include Autoregressive Integrated Time Series moving average, Generalized Least Squares, Vector Auto Regressions (VAR), and Cointegration. The course combines the use of econometric and economic theory, mathematical concepts and practical use of Eviews to ensure that students gain a working knowledge of the use of econometric tools. The course is assessed in two parts, the first part consists of a course project accounting for 25% percent of the final grade and the final examination accounts for 75% of the overall grade. The mission of the course focuses on key econometric concepts to ensure quality research and training in the field of econometrics.

1.2 Rationale

This course is important to students pursuing tertiary studies social sciences because it trains students to scientifically use research tools to analytically simulate and forecast relationships. Students who intend to pursue graduate studies and those who wish to enter the workforce immediately will benefit from this course. Graduate work in the area of economics usually calls for some prior econometric knowledge. The completion of this course will give you an added advantage in the workplace as employers often ask for econometric training.

1.3 Aims/Goals

The objective of the course is for the student to learn how to conduct – and how to critique – empirical studies in economics and related fields. Accordingly, the emphasis of the course is on empirical applications.

Students are expected to have a proper knowledge of the content taught in ECON 3049. Please revise accordingly if you do not.

You are also expected to use your knowledge of the econometric Eviews programme in this course. If you do not have prior knowledge of this programme, I advise that you gain experience with it by reading the help files and actually doing some work with it on your own.

The mathematics of econometrics will be introduced only as needed and will not be a central focus, however, some knowledge of matrix algebra is expected and you would be referred accordingly during the class to material that will assist you in this area.

2.4 Learning Outcomes/Objectives

The main objective of this course is to provide students with a thorough understanding of core techniques of advanced time series topics and learn how to apply them to test economic theories and design economic policies. The student will learn how to use data to test economic models, and how to quantify parameters of interest; these skills comprise an important part for the professional training of an economist. The main focus will be on econometric methods that are useful to analyze macro-level data, and on the empirical application of policy questions applicable to Small Island Developing States.

2.5 Learning Outcomes Guide

Upon successful completion of ECON3050, the students will be able to:	Cognitive Domain	Psychomotor Domain	Affective Domain
1. Define and explain the importance and treatment of lags in econometrics	Knowledge	Articulation	
2. Demonstrate the appropriate use of autocorrelation model to test for serial correlation	Application	Manipulation	
3. Describe an AR1 error and ARDL models	Knowledge		
4. Explain the use of random variables in regressions	Comprehension		
5. Discuss the inconsistent relationship between a random independent variable and the error term	Comprehension		Valuing
6. Describe and explain the errors-in-variables problem	Knowledge		
7. Describe the properties of good instrumental variables.	Evaluation		
8. Discuss the failure of Least Squares and identify the problem	Comprehension		Valuing
9. Define and discuss the theory of cointegration	Knowledge		Valuing
10. Apply cointegration to find and analyse the relationship between two or more economic time series	Analysis	Articulation	
11. Compare and Contrast the Engle Granger as a foundation of cointegration and the Johansen procedure for application	Analysis	Manipulation	

12. Perform, interpret and analyse a VAR regression	Application	Articulation	
13. Evaluate a VAR regression using impulse response and variance decomposition	Problem Solving	Articulation	
14. Perform, interpret and analyse the Granger 2-step procedure	Application	Articulation	
15. Use and interpret the concept of causality utilized in economics	Application		
16. Relate and interpret logs, trends and cycles in regressions	Knowledge		
17. Demonstrate the use of Generalized Least Squares	Application		
18. Compare and Contrast the strength and weaknesses of GLS	Analysis		

2 COURSE ASSESSMENT

3.1. LINKAGE OF ASSESSMENT METHODS TO LEARNING OUTCOMES

Assessment Method	Learning Outcomes (Corresponds to list in section 2.5)																		Weighting %	Assessment Description	Duration	
	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7	LO 8	LO 9	LO 10	LO 11	LO 12	LO 13	LO 14	LO 15	LO 16	LO 17	LO 18				
Project	X								X	X	X	X	X	X	X	X			25 %	In-course Assessment		
Short Response Questions	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	75%	Final Examination	2 hours

3 TEACHING METHODS

Method	Description
Lecture	Students will be required to attend lectures consisting of two (2) contact hours per week.
Project	To be Announced
Laboratory work	Students are required to attend one lab session consisting of a one (1) hour session for the semester. (Dates to be confirmed.)
Tutorials	Students are required to attend one tutorial session for one hour per week and complete all tutorial sheets.

Week	Topics	Readings/Resources	Activities including Assessments
1.	Revision and Course Overview Dynamic Nature of Relationships; Stationarity, Lags, Autoregressive Models, Smoothing	<u>Principles of Econometrics</u> Hill, Carter, William E. Griffiths and Quay C. Lim (2001)	Tutorial Sheet #1
2.	Large Sample Properties of Least Squares; Endogenous Relationship; Errors-in-variables; Simultaneous Equation Bias; Instrumental Variables	<u>Principles of Econometrics</u> Hill, Carter, William E. Griffiths and Quay C. Lim (2001)	Tutorial Sheet #1
3.	Stationarity	<u>New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression.</u> Charemza W. Wojciech and Deadman F. Derek (1997)	Tutorial Sheet #2
4.	Cointegration	Course notes in myeLearning <u>New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression</u>	Tutorial Sheet #3
5.	Cointegration (continued)	Course notes in myeLearning	Tutorial Sheet #3
6.	Vector Autoregression Modelling with Applications	Course notes in myeLearning. <u>New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression</u>	Tutorial Sheet #4
7.	Vector Autoregression Modelling with Applications (continued)	Course notes in myeLearning <u>New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression</u>	Tutorial Sheet #5
8.	Granger Causality	Course notes in myeLearning <u>New Directions in Econometric Practice:</u>	Tutorial Sheet #6

Week	Topics	Readings/Resources	Activities including Assessments
		<u>General to Specific Modelling, Cointegration, and Vector Autoregression</u>	
9.	Logs, Trend and Cycles	<u>Principles of Econometrics</u> Hill, Carter, William E. Griffiths and Quay C. Lim (2001). Woolridge, M. Jeffrey (2013). <u>Introductory Econometrics: A Modern Approach</u> . 5 th Edition. USA Carnegie.	Tutorial Sheet #6
10.	Generalized Least Squares	Course notes in myeLearning <u>Principles of Econometrics</u> Hill, Carter, William E. Griffiths and Quay C. Lim (2001)	Tutorial Sheet #7
11.	Regression with Qualitative Information	<u>Principles of Econometrics</u> Hill, Carter, William E. Griffiths and Quay C. Lim (2001)	Tutorial Sheet #7
12.	Course Review; Clarification of Issues etc. (<i>no introduction of new subject matter</i>)		

5 READINGS/RESOURCES

5.1 Required/Essential (Online and print)

- Hill, Carter, William E. Griffiths and Quay C. Lim (2011). Principles of Econometrics. 4th Edition. USA John Wiley & Sons, Inc.
- Woolridge, M. Jeffrey (2013). Introductory Econometrics: A Modern Approach. 5th Edition. USA Carnegie.

5.2 Recommended (Online and print)

- Charemza W. Wojciech and Deadman F. Derek (1997). New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression. 2nd Edition

5.3 Other: (Special Equipment/Tools)

- Myelearning site – course code ECON3050

Class Attendance Policy

Regular class attendance is essential. A student who misses a class will be held responsible for the class content and for securing material distributed. Attendance is the responsibility of the student and consequently nonattendance will be recorded. **In the Faculty of Social Sciences, students missing more than 75% of tutorials are liable to be debarred from Examinations.** Please review the handbook on *Examination Regulations for First Degrees, Associate Degrees, Diplomas, and Certificates* (Regulation 19).

Examination Policy

Please review the handbook on *Examination Regulations for First Degrees, Associate Degrees, Diplomas, and Certificates* available via the Intranet.

Academic Conduct/Misconduct

Policy for Cheating/Plagiarism

97. (i) Cheating shall constitute a major offence under these regulations.
(ii) Cheating is any attempt to benefit oneself or another by deceit or fraud.
(iii) Plagiarism is a form of cheating.
(iv) Plagiarism is the unauthorized and/or acknowledged use of another person's intellectual effort and creations howsoever recorded, including whether formally published or in manuscript or in typescript or other printed or electronically presented form and includes taking passages, ideas or structures from another work or author without proper and unequivocal attribution of such source(s), using the conventions for attributions or citing used in this University.
103. (i) If a candidate is suspected of cheating, or attempting to cheat, the circumstances shall be reported to the Campus Registrar. The Campus Registrar shall refer the matter to the Chairman of the Campus Committee on Examinations. If the Chairman so decides, the Committee shall invite the candidate for an interview and shall conduct an investigation. If the candidate is found guilty of cheating or attempting to cheat, the Committee shall disqualify the candidate from the examination in the course concerned, and may also disqualify him/her from all examinations taken in that examination session; and may also disqualify him/her from all further examinations of the University, for any period of time, and may impose a fine not exceeding Bds#300.00 or J\$5,000.00 or TT\$900.00 or US\$150.00 (according to campus). If the candidate fails to attend and does not offer a satisfactory excuse prior to the hearing, the Committee may hear the case in the candidate's absence.

Statement of Disability Procedures

The University of the West Indies ST. Augustine is committed to providing an educational environment that is accessible to all students, while maintaining academic standards. In accordance with this policy, students in need of accommodations due to a disability should contact the Academic Advising /Disabilities Liaison Unit (AADLU) for verification and determination as soon as possible after admission to the University, or at the beginning of each semester.

2014/2015 Grading Policy for Undergraduate Students
Grade Descriptors

Grade	% Range	Grade Point	Grade Definition	Grade Descriptor
A+	90 -100	4.3	Exceptional	Demonstrates exceptional performance and achievement in all aspects of the course. Exceptional application of theoretical and technical knowledge that demonstrates achievement of the learning outcomes. Goes beyond the material in the course and displays exceptional aptitude in solving complex issues identified. Achieves the highest level of critical, compelling, coherent and concise argument or solutions within the course.
A	80 – 89	4.0	Outstanding	Demonstrates outstanding integration of a full range of appropriate principles, theories, evidence and techniques. Displays innovative and/or insightful responses. Goes beyond the material with outstanding conceptualization which is original, innovative and/or insightful. Applies outstanding critical thinking skills.
A-	75 - 79	3.7	Excellent	Demonstrates excellent breadth of knowledge, skills and competencies and presents these in appropriate forms using a wide range of resources. Demonstrates excellent evidence of original thought, strong analytical and critical abilities; excellent organizational, rhetorical and presentational skills.
B+	70 - 74	3.3	Very Good	Demonstrates evidence of very good critical and analytical thinking in most aspects of the course. Very good knowledge that is comprehensive, accurate and relevant. Very good insight into the material and very good use of a range of appropriate resources. Consistently applies very good theoretical and technical knowledge to achieve the desired learning outcomes.
B	65 - 69	3.0	Good	Demonstrates good knowledge, rhetorical and organizational skills. Good insight into the material and a good use of a range of appropriate resources. Good integration of a range of principles, techniques, theories and evidence.

Grade	% Range	Grade Point	Grade Definition	Grade Descriptor
B-	60 - 64	2.7	Satisfactory	Displays satisfactory evidence of the application of theoretical and technical knowledge to achieve the desired learning outcomes. Demonstrates sound organizational and rhetorical skills.
C+	55 - 59	2.3	Fair	Demonstrates fair breadth and depth of knowledge of main components of the subject. Fair evidence of being able to assemble some of the appropriate principles, theories, evidence and techniques and to apply some critical thinking.
C	50 - 54	2.0	Acceptable	Demonstrates acceptable application of theoretical and technical knowledge to achieve the minimum learning outcomes required in the course. Displays acceptable evidence of critical thinking and the ability to link theory to application.
F1	40 - 49	1.7	Unsatisfactory	Demonstrates unsatisfactory application of theoretical and technical knowledge and understanding of the subject. Displays unsatisfactory ability to put theory into practice; weak theoretical and reflective insight. Unsatisfactory critical thinking, organizational and rhetorical skills.
F2	30 - 39	1.3	Weak	Weak overall performance with very limited knowledge and understanding of the subject. Little evidence of theoretical and reflective insights. Weak organizational and rhetorical skills.
F3	0 - 29	0.0	Poor	Overall poor or minimal evidence of knowledge and understanding of the subject. Displays little ability to put theory into practice; lacks theoretical and reflective insights. Incomplete breadth and depth of knowledge on substantive elements of the subject. Little or no evidence of critical engagement with the material. Responses are affected by irrelevant sources of information, poor organizational and rhetorical skills.