Subject Description Form

Subject Code	AF3622
Subject Title	Analysis of Economic Data
Credit Value	3
Level	3
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	• To provide students with basic skills relating to the searching, downloading, displaying, graphing and analysis of economic data • To provide students with basic knowledge of econometrics • To expose students to specific problems likely to be encountered in survey, collection and interpretation of economic and business data • To provide a thorough understanding of basic statistical tools • To introduce the methodology and basic skills necessary for designing and undertaking independent economic research
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. collect data and understand data problems b. understand basic econometrics theories c. apply data analysis and econometrics methods that could be used in research d. solve statistical problems often encountered in research e. incorporate the knowledge learnt from other subjects in research design f. use the econometrics software for model estimation
Subject Synopsis/ Indicative Syllabus	**Nature of Econometrics and Economic Data** What is econometrics? Types of economic data **The Simple Regression Model and Ordinary Least Squares (OLS)** Properties of the Simple Regression Model. Assumptions and properties of OLS **The Multiple Regression Model** Properties and estimation of the Multiple Regression Model **Introduction to Econometrics software –The Design of a Research Project** Basic econometrics command. Locate a research problem and develop a theoretical argument (hypothesis). Develop a statistical model for empirical investigation **Hypothesis Tests and Confidence Intervals** Null and alternative hypotheses. Type I and type II errors. Decision rule, rejection & acceptance regions and critical values **Model Specification and Functional Forms** Basic types of model misspecification. Omitted and irrelevant variables. Specification criteria and choice of functional forms

<table>
<tr><td></td><td>Multicollinearity
Consequences, detection and remedies of multicollinearity

Serial Correlation
Nature, consequence and remedies of serial correlation

Heteroskedasticity
Consequences, detection and remedies of heteroskedasticity

Time series analysis
Stationary and non-stationary series. Unit root tests. Vector autoregressive models. Error correction models</td></tr>
<tr><td>Teaching/Learning Methodology</td><td>There will be a 3-hour seminar per week. The first two hours will be structured as lecture to help students to understand data analysis, econometrics concepts and estimation.

The remaining one hour will be used as tutorial, for which students are required to discuss answers from tutorial questions and work with econometrics program. Tutorials provide students with the opportunity to deepen their understanding of the concepts taught in lectures and to apply the econometrics theories to the analysis of real-life economic issues.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>
<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="6">Intended subject learning outcomes to be assessed (Please tick as appropriate)</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td></tr>
<tr><td>1. Assignments</td><td>20%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>2. Attendance and Participation</td><td>10%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>3. Test</td><td>20%</td><td></td><td>√</td><td></td><td>√</td><td></td><td></td></tr>
<tr><td>4. Examination</td><td>50%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>Total</td><td>100 %</td><td colspan="6"></td></tr>
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Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Assignments are used to test students' ability in achieving the intended learning outcomes through a more in-depth investigation of different topics.

Attendance and participation are used to encourage students to attend and actively participate in class.

Mid-term test and final examination are used to test students' overall ability in achieving the intended learning outcomes.</td></tr>
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Student Study Effort Required	Class contact:	
	▪ Seminars	39 Hrs.
	Other student study effort:	
	▪ Reading subject textbooks	42 Hrs.
	▪ Preparation for tutorial homework and presentation	24 Hrs.
	Total student study effort	105 Hrs
Reading List and References	***Textbook*** A. Studenmund, *Using Econometrics: A Practical Guide*, Sixth Edition (Pearson, 2011) ***Reference Books*** Damodar N. Gujarati, *Basic Econometrics*, Fourth Edition (McGraw-Hill, 2003) Damodar N. Gujarati, *Essentials of Econometrics*, Second Edition (McGraw-Hill, 1999) Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach*, Third Edition (Thomson South-Western, 2006) Robert S. Pindyck and Daniel L. Rubinfeld, *Econometric Models and Economic Forecasts*, Fourth Edition (McGraw-Hill, 1998)	