1. KentVision Code and title of the module

ECON5430 Econometrics 2: Topics in Times Series

## Division and School/Department or partner institution which will be responsible for management of the module

Division of Human and Social Sciences, School of Economics

## The level of the module (Level 4, Level 5, Level 6 or Level 7)

Level 6

## The number of credits and the ECTS value which the module represents

15 credits (7.5 ECTS)

## Which term(s) the module is to be taught in (or other teaching pattern)

Spring

## Prerequisite and co-requisite modules and/or any module restrictions

**Prerequisites**:

* ECON5000 Microeconomics
* ECON5020 Macroeconomics
* ECON5800 Introduction to Econometrics, (65% threshold)
* ECON5810 Introduction to Time Series Econometrics, (65% threshold)

## The course(s) of study to which the module contributes

**Compulsory** for Single Honours Economics with Econometrics, and Financial Economics with Econometrics degrees (including year in industry variants).

**Elective** for all other Single (BSc.) and Joint (BA.) Honours Degree Programmes in Economics

Also available to well-qualified students from other Faculties, e.g. statistics students.

## The intended subject specific learning outcomes. On successfully completing the module students will be able to:

8.1 Understand and abstract the time-series properties of economic data

8.2 Synthesise and critically compare different econometric analyses of an economic issue

8.3 Demonstrate analytical skills that can be used to formulate and consider a range of econometric problems and issues

8.4 Practise the use of econometric concepts especially in relation to time series analysis

8.5 Demonstrate critical understanding of statistical, graphical and numerical data analyses

8.6 Collate, examine and interpret time-series data in the context of economic theory and policy.

## The intended generic learning outcomes. On successfully completing the module students will be able to:

* 1. Retrieve, review and analyse data and information from a variety of sources
  2. Address an economic problem using deductive and inductive reasoning
  3. Apply advanced econometric methods to support their understanding of economics
  4. Communicate coherent economic ideas and arguments verbally and in writing
  5. Plan work and study independently.

## A synopsis of the curriculum

This module presents a systematic and operational approach to the econometric modelling of economic time series, which gives an understanding of the techniques in practical, appropriate, analytical and rigorous manner. Econometric analysis is a core skill in modern economics.

The module gives an introduction to univariate time series analysis, dynamic econometric modelling and multiple time series, linking theory to empirical studies of the macroeconomy

All topics are illustrated with a range of theoretical and applied exercises, which will be discussed in seminars and computer classes. As such, the module emphasises the development of practical skills in the use of software for empirical research, and introduces students to the research methods used by macroeconomists in academia, government departments, think tanks and financial institutions. It also helps students to prepare for the quantitative requirements of a master programme in economics.

## Reading list

## The University is committed to ensuring that core reading materials are in accessible electronic format in line with the Kent Inclusive Practices.

## The most up to date reading list for each module can be found on the university's [reading list pages](https://kent.rl.talis.com/index.html).

Time series econometrics is an expansive area of econometric theory and application. Most modern introductory texts provide an introduction to the issues discussed in the module:

* Green, W.H. (2019). Econometric Analysis. 8th edition, Englewood Cliffs, NJ: Prentice
* Johnston, J. and J. DiNardo (1997). Econometric Methods. 4th edition, New York: McGraw.
* Wooldridge J.M. (2016). Introductory Econometrics. 6th edition, Cengage.

Advanced textbooks on time-series econometrics include:

* Enders, W. (2014), *Applied Economics Time Series*. 4th edition. New York: Wiley.
* Franses, P.H., vanDijk, D., and A. Opschoor (2014), *Time Series Models for Business and Economic Forecasting. 2nd edition.* Cambridge: Cambridge University Press.
* Hamilton, J.D. (1994). *Time Series Analysis*. Princeton: Princeton University Press.
* Hendry, D.F. (1995). *Dynamic Econometrics*. Oxford: Oxford University Press.
* Lütkepohl H. (2006). *Introduction to Multiple Time Series Analysis*. New York: Springer.

## Contact Hours

Private study hours: 120 hours

Contact hours: 30 hours

Total: 150 hours

## Assessment methods

* 1. Main assessment methods
* In Course Test (1 hour) (10%)
* Group Project (10 pages) 20%
* Examination, 2 hours (70%)

13.2 Reassessment methods

Reassessment Instrument: 100% exam

## Map of module learning outcomes (sections 8 and 9) to learning and teaching methods and methods of assessment (section 13)

**Module learning outcomes against learning and teaching methods:**

| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Lecture | **x** | **x** | **x** | **x** | **x** |  | **x** | **x** |  |  |
| Seminar | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Terminal Class | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** |

**Module learning outcomes against assessment methods:**

| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ICT | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Group Project | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Examination | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |

## Inclusive module design

The Division recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

## Campus(es) or centre(s) where module will be delivered

Canterbury

## Internationalisation

The module provides students with the analytical and practical skills necessary to undertake empirical evaluation of (economic) data. It is a module based on methodology and their application. In practice, data sources will have an international dimension.

**DIVISIONAL USE ONLY**

**Module record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

| **Date approved** | **New/Major/Minor revision** | **Start date of delivery of (revised) version** | **Section revised(if applicable)** | **Impacts PLOs (Q6 & 7 cover sheet)** |
| --- | --- | --- | --- | --- |
| 6.12.21 | Major | Spring 2023 | 10, 11, 12 | No |
|  |  |  |  |  |