1. **Title of the module**

ECON8200 Time Series Econometrics

1. **School or partner institution which will be responsible for management of the module**

School of Economics

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 7

1. **The number of credits and the ECTS value which the module represents**

15 (7.5 ECTS)

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

Spring

1. **Prerequisite and co-requisite modules**

Prerequisite:

ECON8210 Econometric Methods

1. **The programmes of study to which the module contributes**

This is a compulsory module for the:

* MSc in Economics and Econometrics
* MSc in Quantitative Finance and Econometrics

This is an optional module for the:

* MSc in Economics
* MSc in Financial Economics
* MSc in International Finance and Economics
1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**
	1. have comprehensive understanding of econometric techniques used with time series data
	2. demonstrate critical assessment in reading and interpretation of empirical macroeconomic research
	3. be practised in own modelling of economic series using advanced econometric theory
	4. have the ability to undertake complex empirical research using statistical software for time series analysis
2. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**
	1. utilise modern computing resources to access and acquire time series data from relevant sources
	2. demonstrate enhanced problem-solving skills with complex quantitative models
	3. present convincing and rigorous economic arguments orally as well as in written form
3. **A synopsis of the curriculum**

The module offers a research-oriented introduction to contemporary time series econometrics by linking econometric theory to empirical studies of the macro-economy and financial markets. It introduces models and methods used in central banks and research institutions for policy analysis and forecasting. It integrates empirical illustrations through the use of computer-based exercises with macroeconomic and financial data using appropriate software. We start with providing comprehensive treatment of univariate time series analysis and deal in details with the modelling and forecasting of stationary and nonstationary stochastic processes. We then look into models of time-varying volatility. Finally, we generalize the learned techniques to multiple time series and study cointegration.

1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

*Core reading*

* Hamilton, James. Time Series Analysis. Princeton University Press, 2014.
* Enders, Walter. Applied Econometric Times Series. 4th Edition. Wiley, 2014.
* Lütkepohl, Helmut. New Introduction to Multiple Time Series Analysis. Springer, 2006.

*Recommended reading*

* Franses, Philip, van Dijk, Dick and Anne Opschoor. Time Series Models for Business and

Economic Forecasting. 2nd Edition. Cambridge University Press, 2016.

This list will be augmented by the articles from such journals as *American Economic Review*, *Econometrica*, *Journal of Applied Econometrics*, *Journal of Econometrics*, *Journal of Economic Perspectives*, *Journal of Political Economy*, *Quarterly Journal of Economics* and *Review of Economic Studies* among others.

1. **Learning and teaching methods**

*Total contact hours: 36*

*Private study hours: 114*

*Total study hours: 150*

1. **Assessment methods**
	1. Main assessment methods

Project (2000 words): 30%

In course Test (60 minutes): 10%

Examination (2 hours): 60%

13.2 Reassessment methods

*Reassessment Method: 100% exam*

1. ***Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 9.1 | 9.2 | 9.3 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |
| Lectures | **x** | **x** |  |  |  | **x** |  |
| Seminars | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Independent Study | **x** | **x** | **x** | **x** | **x** | **x** |  |
| **Assessment method** |  |  |  |  |  |  |  |
| In-Couse Test |  | **x** | **x** | **x** |  | **x** | **x** |
| Project  | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Exam | **x** | **x** |  | **x** |  | **x** | **x** |

1. **Inclusive module design**

The School 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:

1. Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

The subject content of the module focuses primarily on UK policy design but the underlying issues considered apply in an international context and relevant comparisons will be drawn upon across each topic area.

**FACULTIES SUPPORT OFFICE USE ONLY**

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 20/06/2018 | Major | January 2020 | 7, 8, 9, 14 |  |
|  |  |  |  |  |

Revised FSO Jan 2018