

**Module Title: APPLIED ECONOMETRICS**

- **Type of Module:**

ΓΕ0025	Elective Stream Module
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- **Level of Module**

*Postgraduate*

- **Year of Study**

MASTER'S
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- **Semester**

Spring Semester 2 <sup>nd</sup> period
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- **Number of credits allocated**

3
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- **Name of lecturer / lecturers : Xideas Evangelos**

- **Description:**

The course aims to familiarize students with an econometric approach of issues deriving during specification, identification, estimation and evaluation of models formed to quantitatively investigate areas of applied economics.

It aims to familiarize students with techniques which enable researchers to quantify and estimate economic relations especially when they use time series empirical data.

It equips students with fundamental knowledge of time series analysis as well as necessary tools to test, evaluate and forecast, focusing on issues concerning finance and shipping markets research.

- **Prerequisites:** Not Applicable / No Lab

- **Module Contents (Syllabus):**

The course provides methods and techniques necessary to estimate models and forecasts focusing on the use of time series variables.

- Econometric Specification
  - Estimation of Classical Linear Regression Model
  - Evaluation of Linear regression Model
  - Failure of Assumptions
  - Seemingly Unrelated Regressions
  - ARCH model
  - GARCH model
  - Time Series Analysis
  - Stationary stochastic procedures
  - Unit Roots - Integration
  - Cointegration - Error Correction Model
  - VAR - models
  - Exogeneity - Causality
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**Language of instruction / Γλώσσα διδασκαλίας**

Greek

**Name and contact info of lecturer / Στοιχεία διδάσκοντα**

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**Expected learning outcomes / Μαθησιακοί στόχοι**

At the end of the cycle students must be able to:

- Specify, estimate and evaluate an econometric model
- Be able to comprehend issues and topics of Time Series Analysis
- Handle techniques of Time Series Analysis
- Test and estimate one equation or multiple equations time series models and make forecasts

**Mode of delivery and teaching methods / Είδος μαθήματος και διδακτική μέθοδος**

There are 3 hour lectures (including theory and cases) and another 6 – 8 hours of econometric applications with the use of appropriate software.

**Compulsory & recommended reading / Υποχρεωτική & Συνιστώμενη βιβλιογραφία**

**A) Principal Reference:**

- «Οικονομετρία», Χάλκος Γ., Εκδόσεις Gutenberg, Αθήνα, 2011
- «Σύγχρονη Οικονομετρική Ανάλυση», Τομ. Α' και Β', Α. Κιντής, Εκδόσεις Gutenberg, Αθήνα, 2010
- «Εισαγωγή στην Οικονομετρία», τομ. Α' και Β', Γ. Χρήστου, Εκδόσεις Gutenberg, Αθήνα, 2007
- «Οικονομετρικές Μέθοδοι», J. Johnston and J. Dinardo, Εκδόσεις Κλειδάριθμος, Αθήνα, 2004
- «Εισαγωγή στην Οικονομετρία», Wooldridge, J., Τομ. Α' και Β', Εκδόσεις Παπαζήση, Αθήνα, 2003

**B) Additional References:**

- «Σύγχρονες Μέθοδοι Ανάλυσης Χρονολογικών Σειρών», Σοφία Δημέλη, Αθήνα, Εκδόσεις Κριτική, 2003
  - «Ένδεκα Μαθήματα Οικονομετρίας», Ι.Α. Κασκαρέλης, Εκδόσεις Gutenberg, Αθήνα, 2000
  - «Βασική Οικονομετρία: Θεωρία και Πράξη», Ανδρικόπουλος Α., Τομ. Α' και Β', Εκδόσεις Μπένου, Αθήνα, 2003.
  - “Econometrics”, G. S. Maddala, MC GROW HILL, 1983
  - “Theory of Econometrics”, A.A Koutsoyannis, MACMILLAN, 1977
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- “Econometric Models And Economic Forecasts”, R.S. Pinduck AND D.L. Rubinfeld, Mc GROW HILL, 2000
- “Econometric Theory”, J. Davinson, BLACKWELL, 2000
- “Basic Econometrics”, D. N. Gujarati, MC GROW HILL, 1995
- “Econometrics”, Fumio Hayashi, Princeton University Press, 2000.
- “Time Series Analysis”, Hamilton J. D. Princeton University Press. 1996
- “Using Cointegration Analysis in Econometric Modeling”, Harris R., Prentice Hall, Harvester Wheat Sheaf, 1995
- “Econometric Modelling of World Shipping , M . Beenstock and A. Vergottis, Chapman and Hall,1993.

**Assessment methods & criteria / Μέθοδος & κριτήρια αξιολόγησης**

Assessment depends on a study which includes the use of empirical data for estimation, testing, evaluation and yielding of conclusions concerning the investigation of economic markets especially from finance and / or shipping areas. The study must have a specific structure according to the demands of a scientific paper.

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