

# ECON 3006 ECONOMIC AND FINANCIAL MODELLING

**Credit Points** 10

**Legacy Code** 200916

**Coordinator** Maria Estela Varua ([https://directory.westernsydney.edu.au/search/name/Maria Estela Varua/](https://directory.westernsydney.edu.au/search/name/Maria%20Estela%20Varua/))

**Description** Economic and Financial Modelling examines regression analysis and its use in business especially in economics, finance and accounting. Topics will include the properties of estimators, hypothesis testing, specification error, multicollinearity, dummy variables, heteroskedasticity, serial correlation. It also introduces other modelling techniques in finance and economics. Empirical assignments undertaken by the student form an integral part of the unit. The emphasis is on learning by doing in small group workshops.

**School** Business

**Discipline** Econometrics

**Student Contribution Band** HECS Band 4 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 3 subject

**Pre-requisite(s)** MATH 1030 OR ECON 1006

**Equivalent Subjects** ECON 3004 - Economic Modelling

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Apply the basic elements of econometric modelling and forecasting.
2. Demonstrate how standard computer software may be used to analyse simple financial and economic problems with a statistical package.
3. Demonstrate hands-on experience in constructing econometric models.
4. Define business problems and analyse using appropriate quantitative techniques.

## Subject Content

1. Econometrics and testing economic hypotheses. What should an econometrics report contain?
2. The probability foundations of econometrics.
3. Point estimation in the classical linear econometric model; least squares and likelihood criteria.
4. Hypothesis testing: the Wald, Lagrange multiplier and likelihood ratio tests.
5. Model diagnostics; heteroskedasticity, autocorrelation, model specification testing.
6. Generalised least squares, feasible generalised least squares including autocorrelated errors.
7. Dealing with binary independent variables.
8. Instrumental variable methods.
9. Model discrimination testing; nested tests and testing linear restrictions; non-nested tests.

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Intra-session Exam	90 minutes	20	N	Individual	Y
Report	Up to 10 pages (3,000 words equivalency)	20	N	Group	Y
Participation	20 minutes each	10	N	Individual	Y
Final Exam	3 hours	50	N	Individual	Y

**Prescribed Texts**

- Hill, CR, Griffiths, WE and Lim, GC 2011, Principles of econometrics, 4th edn, Wiley and Sons.

**Teaching Periods**

## Vietnam Session 2 (2025)

### Vietnam

#### On-site

**Subject Contact** Maria Estela Varua ([https://directory.westernsydney.edu.au/search/name/Maria Estela Varua/](https://directory.westernsydney.edu.au/search/name/Maria%20Estela%20Varua/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=ECON3006\\_25-UT2\\_UE\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ECON3006_25-UT2_UE_1#subjects))

## Sydney City Campus - Term 2 (2025)

### Sydney City

#### On-site

**Subject Contact** Neelam Goela ([https://directory.westernsydney.edu.au/search/name/Neelam Goela/](https://directory.westernsydney.edu.au/search/name/Neelam%20Goela/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=ECON3006\\_25-SC2\\_SC\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ECON3006_25-SC2_SC_1#subjects))

## Spring (2025)

### Parramatta City - Macquarie St

#### On-site

**Subject Contact** Maria Estela Varua ([https://directory.westernsydney.edu.au/search/name/Maria Estela Varua/](https://directory.westernsydney.edu.au/search/name/Maria%20Estela%20Varua/))

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