What this course is about

How do economists reason so as to provide useful general explanations? How do economists know when their useful general explanations are true? This course takes these two questions as its central focus.

In Economic Reasoning we shall discover a great deal about the diverse ways in which economists reason. Issues which you may not have thought much about in your earlier studies of economics will here come under close scrutiny, and your participation in discussing these issues during the weekly seminars will be welcomed. It is by no means the case that everything is today settled about these issues. There are, indeed, considerable differences of opinion on almost everything. Yet, these are not destructive controversies. On the contrary, almost everyone’s efforts are directed towards reaching constructive conclusions. It is these characteristics that make the study of Economic Reasoning so intellectually exciting.

In its practice, economics is a social science as well as a policy art. Many crucial questions about how the economy functions remain in dispute, though economics has tried to resolve them in a systematic (and, we would say nowadays, scientific) fashion for over 200 years. Similarly, there are still many controversies over the appropriate choice of policy direction in given economic and political circumstances.

We shall locate economics among the social sciences (in Part I of the syllabus) by taking a perspective view of the development of science (physical, biological and social) over the past three centuries, and seeing how economists transformed economics from a facet of politics to a branch of the sciences over the past century or so. We shall, along the way, introduce a logical approach to appraising these developments. This approach comes in part from the ideas of economists, themselves, but also borrows a great deal from philosophy — in particular, from the branch of philosophy known as epistemology.

Epistemology considers the fundamental question: how do we know things? Within epistemology is the field of methodology (the appraisal of alternative methods for knowing what is rational, or what is useful, or what is true). Among these alternative methods is the so-called scientific method.

There is controversy also over what is to be understood by scientific method! It is generally agreed today that ‘scientific method’ as prescribed for the experimental sciences need not be appropriate for those sciences that are essentially nonexperimental (e.g. astronomy, geology, and economics). We shall visit aspects of this controversy, as well.
In a setting of richly diverse views on the appropriate scientific method for advancing knowledge in economics we shall take a first analytical look at the fundamental questions of this course:

- How do economists reason so as to provide useful general explanations?
- How do economists know when their useful general explanations are true?

Economic reasoning proceeds in either or both of two ways: the qualitative and the quantitative. Quantitative economic reasoning has been in vogue only since the 1950s when econometrics, the quantitative subdiscipline of economics, had developed sufficiently to be able to promise reliable conclusions. In modern times, these two ways of economic reasoning have a common analytical tool — the model. A model is a concise abstraction of complex reality. Economists are obliged to reason in terms of models because the economy is such a vastly complicated set of multilateral relationships. Only by abstracting from some of this complexity can the human mind grasp, and try to explain, what is fundamentally going on in the economy.

**Part II** of the syllabus will be concerned with **qualitative reasoning in economics**, in which formal models are the primary means for formulating and evaluating useful explanations. We shall approach our appraisal of qualitative reasoning in economics by examining the logical thinking of more than a dozen eminent economists from across all facets of the discipline.

Then, in **Part III** of the syllabus, we shall move to considering **quantitative reasoning in economics**. We shall probe the strengths and weaknesses of econometric models and methods as tools for formulating and testing theories to explain economic behaviour in the real world. We shall ask how far the promise of the econometric approach has been fulfilled.

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**Classes**

Economic Reasoning is presented by Associate Professor Eric Sowey (who is the lecturer-in-charge) and Associate Professor John Lodewijks.

We can be contacted as follows:

**John Lodewijks**  
*Office:* JG 218  
*Telephone:* 9385 3386  
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**Eric Sowey**  
*Office:* JG 216  
*Telephone:* 9385 3319  
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There will be a two-hour lecture (Tuesdays 2-4 pm) and a one-hour seminar (Tuesdays 4-5 pm) each week, all in MAT 1226.

Parts I and III of the syllabus will be presented by Eric Sowey, and Part II by John Lodewijks.
Assessment

A seminar presentation on an eminent economist from Part II of the syllabus. The written up version of approximately 1500 words is due one week after your presentation 20%

A 1500 word essay on a theme of Part III of the syllabus 20%

End-of-session exam (2½ hours) 60%

Scheduling of the seminar presentations will be arranged at the start of Part II lectures.

The choice of topics for the Part III essay and the submission deadline will be given in a separate handout in week 7.

Reading

There is no textbook for the course. Reading lists will be issued for Part II and for Part III of the syllabus. Copies of the references will be found in Open or Closed Reserve for Eric Sowey’s sections. See John Lodewijks for reference material relating to his section.

Seminars

The weekly seminar will generally be taken up with a structured discussion in class of one or more of the references accompanying the previous week’s lecture. It is essential to the success of the seminars as learning experiences that you prepare thoughtfully for this discussion.

John Lodewijks
Eric Sowey

27 July 2004
OUTLINE OF TOPICS

PART I  ECONOMICS AMONG THE SCIENCES

WEEK 1  How do economists reason so as to provide useful general explanations?
—  The formulation of economic models.
Inductivism (empiricism) (Bacon) and deductivism (a priorism) (Descartes)
How are theoretical economic models created?
The merits of explicitly specified models.

WEEK 2  How do economists know when their useful general explanations are true?
—  The evaluation of economic models.
The ‘partial’ nature of economic models, and the ‘ceteris paribus’ clause.
Limitations of verification (pointed out by Popper), but also of falsification!
The econometric approach.

PART II  QUALITATIVE REASONING IN ECONOMICS

WEEK 3  Economics:  from Moral Philosophy to Applied Mathematics.

WEEK 4  Realism, Formalism, Friedman and Chicago.

WEEK 5  The making of an economist:  graduate education.

WEEK 6  The makers of modern economics:  how leading economists think.

WEEK 7  Broadening the boundaries:  “A Beautiful Mind”.

WEEK 8  Economics and Psychology:  improving the psychological realism of economics?

WEEK 9  Experimental, Evolutionary, and New Institutional Economics.

PART III  QUANTITATIVE REASONING IN ECONOMICS


WEEK 11  The promise of econometrics.

WEEK 12  Some problems of econometrics.

WEEK 13  The performance of econometrics.

WEEK 14  The methodological prospect for econometrics in economics.
Topic-by-topic reading lists for Part II

**WEEK 3**  Economics: from Moral Philosophy to Applied Mathematics.


**WEEK 4**  Realism, Formalism, Friedman and Chicago.


**WEEK 5**  The making of an economist: graduate education.


**WEEK 6**  The makers of modern economics: how leading economists think.


WEEK 7  Broadening the boundaries: “A Beautiful Mind”.


WEEK 8  Economics and Psychology: improving the psychological realism of economics?


WEEK 9  Experimental, Evolutionary, and New Institutional Economics.

Part II Seminar Program

From week 4 through to week 10 in seminars we will be examining the contributions of eminent economists. The schedule is as follows:

Week 4  Milton Friedman and J.K. Galbraith
Week 5  Paul Samuelson and Joan Robinson
Week 6  Herbert Simon, Gary Becker and James Buchanan
Week 7  Robert Lucas and Paul Krugman
Week 8  Joseph Stiglitz, George Akerlof and Robert Frank
Week 9  Vernon Smith, Richard Thaler & Daniel Kahneman
Week 10 Richard Nelson & Sidney Winter and Oliver Williamson

Students will provide a discussion of each of these economists, particularly in the context of their approach to economics and economic reasoning. Each student will focus on one of the above mentioned economists and their presentation and finished paper is weighted 20%.

Other notable economists may be substituted for any of the above with the consent of John Lodewijks.

The reference material needed is provided above under **WEEK 6: The makers of modern economics: how leading economists think.** However, a very useful reference is:


This collection includes Lewis, Klein, Arrow, Samuelson, Friedman, Stigler, Tobin, Modigliani, Buchanan, Solow, Sharpe, Coase, North, Harsanyi, Scholes, Becker, Lucas and Heckman.

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**Topic-by-topic reading lists for Part III**

These reading lists will be issued in Week 7.
Of relevance to the theme of Part III

If your previous studies have not included much work in econometrics, you may find it useful to develop/extend your background by some reading in advance of week 10 in one or more of the following books. Titles are listed in order of increasing academic level of the exposition. There is a copy of each book in the Library Open Reserve.


**Econometric concepts of which at least a descriptive knowledge will be desirable to follow the lectures in Part III and to work confidently on the associated essay:**

Statistical (i.e. inductive) inference.
Regression analysis (both simple linear regression and multiple linear regression).
The ‘classical’ regression model.
The method of least squares for estimating a regression model.
R² as a measure of goodness-of-fit in regression.
Optimal properties of statistical estimators: unbiasedness, consistency, efficiency.
Collinearity of regressors in regression analysis.
Autocorrelation of disturbances in regression analysis.
Structural change in regression analysis.
Diagnostic tests for discovering invalidities in the assumptions that underlie the ‘classical’ regression model (for example, the Durbin-Watson test for autocorrelation in regression disturbances).
Data mining in the fitting of regression models to empirical data.
A simultaneous equations econometric model.