



Course syllabus

Faculty Board of Business, Economics and Design
School of Business and Economics

1NA004 Economics I, 30 högskolepoäng
Economics I, 30 credits

Main field of study

Economics

Subject Group

Economics

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved by the Board of the School of Business and Economics 2011-04-03

The course syllabus is valid from autumn semester 2011

Prerequisites

Economics 30 credits. In order to be admitted to Module 6, Portfolio Choice Theory, the student also needs Statistics 15 credits.

Expected learning outcomes

The student should after the full-semester course:

- Have a further enlargement and a deepening of their knowledge and understanding of economic theories and research methods
- Have a further strengthening of their ability to understand and critically assess contemporary research in economics as regards the appropriateness of methods applied and relevance and importance of the results reported

Further specific expected learning outcomes are presented for each module

Module 1: Mathematical Economics II, 7.5 credits

After the module students should have:

- Basic knowledge of mathematical methods
- Knowledge of mathematical application in economics
- The ability to use mathematical methods applied on economic problems

Module 2: Econometrics I, 7.5 credits

After the module the student should be able to:

- Apply statistical methods, ordinary least squares methods, on economic relationship
- Apply standardized diagnostic test and make corrections to the econometric model
- Use standard time series methods such ARIMA-models

Module 3: Environmental Economics and Resource Allocation, 7.5 credits

After the module the student is expected to have:

- A better understanding of how to , from an economic perspective, analyse and understand environmental problems and their origins
- An enhanced knowledge about economic measures against environmental problems
- An increased ability to critically analyse and evaluate economic measures in relation to different types of environmental problems and pollution
- A better understanding about the role of property rights in the economic system and especially in relation to environmental problems
- An increased knowledge about valuation and estimation of values related to the environment
- A better understanding about economics in relation to renewable and delectable resources
- A deeper understanding about the scientific discussion about the view of environmental problems, their origins and measures against them
- An enhanced knowledge in and analysis of different views of sustainable development

Module 4: Labour Economics I, 7.5 credits

After the course the student should be able to:

- Understand and discuss basic theories about the functioning of the labour market
- Understand and discuss individual labour supply decisions and how individuals react to public policies and regulations
- Describe the institutional relationships that exist in the labour market
- Understand the wage setting behaviour of firms and the consequences for the labour market
- Describe and understand labour market policies and its consequences at the individual and market level

Module 5: International Economics, 7.5 credits

After completing this course, the student is expected to independently be able to use the toolkit of international economics to formulate and analyze various real international trade phenomena.

Module 6: Portfolio Choice Theory, 7.5 credits

After the course the student should:

- be able to analyze conditions and developments on the financial markets
- have knowledge about financial assets, the risks of investing in financial assets and how financial assets can be used in risk management
- have knowledge about the formation of prices in financial markets and about the essential theories in finance
- have knowledge about interest rate theory, portfolio theory and derivatives theory
- be able to calculate financial relationships and the price of financial assets

Module 7: Econometrics II, 7.5. credits

After the course the student should be able to:

- Apply statistical methods, ordinary least squares methods, on economic relationship
- Apply standardized diagnostic test and make corrections to the econometric model
- Use discrete choice models and models for categorical variables

Module 8: Socio-Economics, 7.5 credits

The student is expected to have:

- A further enlargement and a deepening of their knowledge and understanding of socioeconomic theories and research methods
- A further strengthening of their ability to understand and critically assess contemporary research in socioeconomics as regards the appropriateness of methods applied and relevance and importance of the results reported
- Knowledge of the main discrepancies and transformations in the architecture of the European welfare, employment and productive systems
- An enhanced understanding of the intricate relationship between the productive, employment, industrial relations and social protection systems
- Knowledge of the consequences and policy responses of major challenges, such as globalization and demographic changes, on the sustainability of our welfare state systems

Content

The course is divided into 8 course modules out of which the student should choose 4, preferably 2 during the first half of the semester and 2 during the second half.

Course modules:

First half of the semester

Module 1: Mathematical Economics II, 7.5 credits

Module 2: Econometrics I, 7.5 credits

Module 3: Environmental Economics and Resource Allocation, 7.5 credits

Second half of the semester

Module 4: Labour Economics I, 7.5 credits

Module 5: International Economics, 7.5 credits

Module 6: Portfolio Choice Theory, 7.5 credits

Module 7: Econometrics II, 7.5 credits

Module 8: Socio-Economics, 7.5 credits

Module 1 Mathematical Economics II 7.5 credits

This module deals with functions of one and several variables, optimization with and without restrictions, integration, vector and matrix algebra and difference equations. The course is applied and is focused on problem solving in economics.

Module 2 Econometrics I 7.5 credits

The course module includes:

- Ordinary least squares method
- Model specification and diagnostic testing
- Dynamic econometric models
- Causality and the method of instrumental variable.
- Identification, estimation, diagnostics and forecasting of ARIMA models

Module 3 Environmental Economics and Resource Allocation 7.5 credits

This module contains economic aspects on origins to environmental problems, such as existents of public goods and external effects. In the course there are also analyses of population and the importance of property rights for environmental problems, also to

what extent this could get difficulties in solving the problems. The course also contains discussions and analyses of problems with the valuing of environmental resources and the distribution of them. In relation to this there are also critical analyses and discussions about the choice of discount rates and views of handling risk.

Resource allocation and the use of resources are analysed with respect to renewable, non renewable and recyclable resources. The course also covers analyses and discussions about scarcity and different types of pollution and ways of handling them in an efficient way. The concept of sustainable development is discussed and analysed. Also there are discussions and analyses of different schools in economics and their view of environmental problems, the origins of them and ways of handling them.

Module 4 Labour Economics I 7.5 credits

This module contains:

- Analysis of demand and supply in the labour market
- Human Capital Theory
- Search theory
- Wage setting under imperfect information
- Application of theoretical models such as estimation of returns on investment in human capital and treatment effects of labour market policies. Analysis of the demand and supply side of the labour market.

Module 5 International Economics 7.5 credits

The course treats theories and models of international trade and uses these theories and models to analyze current issues related to international integration. The first part treats driving forces behind, and effects from, international trade and mobility of input factors between countries. The other part treats the impact of trade barriers (trade policies) such as tariffs, import quotas and subsidies. Here it studied also the formation of trade actions (trade policies) and how they are influenced by different international trade agreements like the world trade organization.

Module 6 Portfolio Choice Theory 7.5 credits

The course includes the following topics:

- Financial markets and financial assets
- Risk, return, the efficient frontier for risky assets and optimal portfolio choice
- CAPM, APT and evaluation of risky investments
- Interest rate calculations and analysis of the yield curve
- The determinants of the interest rate and the term structure of interest rates
- Valuation of bonds, equities, forwards and options
- The law of one price, arbitrage and the efficient market hypothesis on the financial markets
- Risk management with financial assets
- Behavioural finance

Module 7 Econometrics II 7.5 credits

This course module contains:

- Ordinary least squares method
- Model specification and diagnostic testing
- Maximum Likelihood method
- Models for discrete choices
- Models for categorical variables

Module 8 Socio-Economics 7.5 credits

This module includes the following topics:

- Welfare States Structure: an European perspective
- Employment Systems and Working Time Regimes
- Industrial Relations, Bargaining systems and Wage formation
- Transitional Labour Market Approach
- Varieties of Capitalism

Type of Instruction

Module 1: Mathematical Economics, 7.5 credits

Lectures and exercises.

Module 2: Econometrics I, 7.5 credits

Lectures and exercises.

Module 3: Environmental Economics and Resource Allocation, 7.5 credits

Lectures and seminars.

Module 4: Labour Economics I, 7.5 credits

Lectures and exercises.

Module 5: International Economics, 7.5 credits

The material will mainly be presented in lectures. There will, however, be seminars and exercises.

Module 6: Portfolio Choice Theory, 7.5 credits

Teaching can be in the form of lectures, group exercises and seminars. Participation in seminars is compulsory.

Module 7: Econometrics II, 7.5 credits

Lectures and exercises.

Module 8: Socio-Economics, 7.5 credits

Lectures and seminars. Seminars are compulsory.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

Module 1: Mathematical Economics, 7.5 credits

The examination is normally done by written examination.

Module 2: Econometrics I, 7.5 credits

The examination is normally done by written examination.

Module 3: Environmental Economics and Resource Allocation, 7.5 credits

The examination of the students is done through a written exam at the end of the course and through active participation in the seminars, including a written paper and an oral presentation at the seminar. To get the grade Pass, the student should understand and have a good command of the parts of the course. To get Pass with distinction it is required that the student also can master the parts in the course and relate them to each other in a critical way. To get the grade Pass or Pass with distinction it is required that the student writes a paper, which is presented at the seminar. For the paper and the participation in the seminar, the student can get Pass or Fail.

Module 4: Labour Economics I, 7.5 credits

Written examination at the end of the course. The examination can also be done through accounts of prescribed working projects and/or oral examination. A combination of the aforementioned forms of examination is also possible.

Module 5: International Economics, 7.5 credits

The course will be examined with a written exam.

Module 6: Portfolio Choice Theory, 7.5 credits

Examination can be done through oral examination or written test during or after the course. Examination can also be done through accounts of prescribed working projects. A combination of aforementioned forms of examination can also be possible.

Module 7: Econometrics II, 7.5 credits

Written examination at the end of the course and fulfilment of prescribed exercises.

Module 8: Socio-Economics, 7.5 credits

The examination can be done through oral examination and/or written tests. The examination can also be done through accounts of prescribed working projects.

For the full-semester course in general:

The grading is based on assessment of the written exams, reports and the student's ability to present and discuss report contents.

Results are graded using one of the terms Passed with distinction (80% -100%), Pass (60%-79%) or Fail (0%-59%).

Students who do not achieve a satisfactory result in the examinations are permitted to make a second attempt approximately 5-8 weeks after the normal examination date. The student will have a minimum of five occasions for written exams in relation to the syllabus to which the student was accepted. Usually 3 occasions per academic year.

Course Evaluation

A written evaluation is conducted and compiled in a report, which is filed at the department. The result and actions, if taken, are communicated to the teacher responsible for the course and presented to the students in the way most appropriate according to the teacher responsible for the course. Other types of evaluations, such as continuous during the course or oral communication with the students, can occur and is encouraged to secure continuous quality improvement.

Required Reading and Additional Study Material

List of references Module 1 - Mathematical Economics II 7.5 hec

Module 1: Mathematical Economics II, 7.5 credits

Sydsaeter, Knut and Peter Hammond,
Essential Mathematics for Economic Analysis,
Prentice Hall, latest edition, about 500 pages

List of references Module 2 - Econometrics I 7.5 hec

Module 2: Econometrics I, 7.5 credits

Gujarati, Damodar N. *Basic Econometrics*, McGraw-Hill, Latest edition.
Pages: 979

List of references Module 3 - Environmental Economics and Resource Allocation 7.5 hec

Environmental Economics and Resource Allocation, 7.5 credits

Teitenberg, Tom, Lewis, Lynne, *Environmental and Natural Resource Economics*, Addison Wesley, latest edition, 595 pages

Söderbaum, Peter, *Ecological Economics*, Earthscan Publications Ltd, latest edition, 134 pages

Articles

List of references Module 4 - Labour Economics I 7.5 hec

Module 4: Labour Economics I, 7.5 credits

Borjas, G J *Labour Economics* McGraw-Hill International Editions, latest edition.

Pages:500

Articles

Pages:150

List of references Module 5 - International Economics 7.5 hec

Module 5: International Economics, 7.5 credits

Robert C. Feenstra and Alan M. Taylor, *International Trade*, Worth Publishers, latest edition (2008)

List of references Module 6 - Portfolio Choice Theory 7.5 hec

Module 6: Portfolio Choice Theory, 7.5 credits

Elton, Gruber, Brown and Goetzmann *Modern Portfolio Theory and Investment Analysis* (2007) 7e edition, John Wiley & sons inc.

Sidor:700

Scientific Articles within Financial Economics

Pages:150

List of references Module 7 - Econometrics II 7.5 hec

Module 7: Econometrics II, 7.5 credits

List of references Module 8 - Socio-Economics 7.5 hec

Module 8: Socio-Economics, 7.5 credits

Gösta Esping-Anderssen, Bruno Amable, *The Three Worlds of Welfare Capitalism*, Polity Press, 1990, 248 pages

The Diversity of Modern Capitalism, Oxford University Press, 2003, 310 pages

Articles, 200 pages