UNIVERSITY OF GOTHENBURG

SCHOOL OF BUSINESS, ECONOMICS AND LAW

NEA100, Magister Course in Economics, 30,0 higher education credits

Nationalekonomi: Magisterkurs, 30.0 högskolepoäng

Second Cycle

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1. Confirmation

The course syllabus was confirmed by School of Business, Economics and Law on 2006-11-20 and was last revised by School of Business, Economics and Law on 2012-02-27 to be valid from 2012-01-19.

Field of education: Social Sciences 100 %
Department: Department of Economics

2. Position in the educational system

The course is a 30-higher education credits advanced course within the second cycle.

Main field of studies	*Specialization*
Economics	A1N, Second cycle, has only first-cycle course/s as entry requirements

3. Entry requirements

Admission to Magister Course in Economics (NEA100) requires completion of Economics: Introductory level (NEG100, 30 higher education credits) and Economics: Intermediate Level (NEG200, 30 higher education credits) and Bachelor Course in Economics (NEG300, 30 higher education credits) or the equivalent, out of which a minimum of 60 higher education credits must be passed.

Admission to electives in Financial Economics (Investments, Behavioural Finance, Private Equity) requires, in addition to the above, completion of the Intermediate courses in Corporate Finance and International Financial Markets or in International Economics and Financial Markets, or the equivalent.

4. Course content

Elective courses of 15 higher education credits and a 15-higher education credits project paper. The tuition consists of lectures, group exercises, seminars and individual guidance.

5. Learning outcomes

After finishing the course students should have:

1. deeper insights from general economic theory in order to understand observed economic behaviour and how economic theory can be applied to economic problems. Moreover, students should also have deeper knowledge in one area of specialization according to their elective.
2. knowledge of research methodology and research questions in the area of specialization.
3. ability to identify and solve economic problems by means of economic theory and basic econometric methods.
4. ability to clearly structure, write and present a project paper based on relevant scientific methodology.

See below specified contents and learning outcomes for each course unit.

Electives:

Advanced Microeconomic Theory, 7.5 higher education credits

The overall objective of the course is to give a close review of the fundamental micro-economics theory. Basically it is a question about how manufacturers and companies can be intended to act during different circumstances and the results of their acts. In the course, the profit maximizing producer, the utility maximizing consumer and their acts during first and mainly perfect competition is being dealt with. The connection between equilibrium and effectiveness at perfect competition will be emphasized. Furthermore, imperfect competition is being analyzed, in particular in the form of monopolies, using different oligopoly models. Two of the central parts of the microeconomics theory in the course are decision-making during uncertainty and game theory.

Learning outcomes

By the end of the course, students should be able to know and critically analyse:

1. the central parts of the microeconomics theory and the fundamental approach of microeconomics analysis.
2. how different production technology properties influence the profit maximizing company’s supply and demand of products.
3. the meaning and use of the dual model.
4. how the utility maximizing consumer's choices can be analyzed using consumer's preferences, for example by utility function to the consumer's demand, as well as showing the connections between utility maximization and expenditure minimization.
5. the problem of aggregation, for the aggregation of consumers and products, as well as knowing and understanding how different economic situations can be compared and what are the difficulties in that context.
6. and describe the central connections between equilibrium, efficiency and welfare in perfect competition and how these concepts are affected by other market structures like monopoly or different kinds of oligopolies.
7. how uncertainty and risk can be handled while analysing decision-making for consumers and companies, as well as knowing, understanding and being able to apply game theory, in order to analyze the results of different strategies in different situations.

Advanced Macroeconomic Theory, 7.5 higher education credits

The overall objective of the course is to introduce the student to current research methods while providing an overview of modern macroeconomic theory. Long-run growth and development are analysed, as well as

short-run fluctuations and the effects of economics policy. Specific topics include consumption, business-cycle theory, unemployment, inflation, monetary and fiscal policy, growth theory, and open-economy macro-analysis.

Learning outcomes

By the end of the course, students should be able to:

1. comprehend and describe the major macroeconomic theories and relate them to potential empirical investigations.
2. analyze and interpret current economic issues of high policy relevance.
3. relate the specific issues to theory and make an independent and original analysis.

Advanced Development Economics, 7.5 higher education credits

The overall objective of the course is to give the students well grounded knowledge about the analysis of the economic transformation of developing countries. The objective involves a general overview of growth and development theories, including those dealing with incomplete information, incentives and strategic behaviour.

The course covers the major determinants of growth and development identified in the modern development economics literature. The aspects covered include trade, foreign direct investment and aid, as well as the role of economic policies, institutions, and governance for development outcomes.

The course also deals with the relationships between growth, poverty, and income distribution. At the practical level, the course seeks to introduce students to the application of quantitative and statistical techniques that are now central to research and applied work in the development field. Students will be required to carry out case studies using empirical methods, and to present their work to their instructors and fellow students.

Learning outcomes

By the end of the course, students should be able to:

1. analyse growth and the role of physical and human capital in the growth process, as well as the role of population growth.
2. analyse the role of productivity growth and investment in economic development.
3. debate on the role of trade, openness, international economic integration, and globalization in development as well as discuss on the importance of geogra-phy and location for growth prospects.
4. understand and describe the major aspects of development policy including the role of the international financial institutions and foreign aid in policy making and development.
5. understand the role of institutions for policy making and development outcomes.
6. analyse the links between poverty, inequality, and growth as well as the determinants of changes in poverty and income distribution during the development process.
7. have enough relevant knowledge of basic applied statistical methods in order to understand empirical research papers in the development economics field.
8. communicate effectively with researchers, policymakers and practitioners in the field

Environmental Economics: International Issues, 7.5 higher education credits

The overall objective of the course is to give the students comprehensive knowledge of economic theory applied to environmental problems with an international dimension. The course provides students with tools and methods to be able to analyze real and important problems and to critically understand limitations of the tools and methods discussed.

Examples of such issues can be Regional and Global Environmental problems, International Trade and the Environment, Foreign Direct Investments and the Environment, the International Allocation of Wealth and the Environment, International Natural Resource Use and Globalisation and the Political Economy of the Environment.

Learning outcomes

By the end of the course, students should be able to:

1. understand and discuss specific theories and models pertaining to various environmental problems with international aspects. Students should also be able to explain and present these theories, both on a laymen level and an advance level, and to generalize and apply them to specific environmental problems. Learning objective 1 will be tested via written policy briefs and a written report.
2. understand the limitations of the specific theories and models that are discussed, as well as the limitation of the overall underlying theory, when applied to each specific problem. Learning objective 2 will be tested via written policy briefs and a written report.

Public Economics, 7.5 higher education credits

This course covers public economics in a broad sense. In the first part we discuss welfare issues, such as individual welfare measures and social welfare functions, issues that can be seen as foundations for public economics.

The course covers different kinds of market failure and we go through the dilemmas of public goods provision and externalities.

One part of the course deals with taxation. We discuss fundamental theoretical apects, such as distortions and different kinds of taxation, as well as what tax systems in different countries really look like. One important aspect, which makes taxation a difficult, is the so called equity-efficiency trade-off. If we want to use taxation for redistributive purposes we are often dependent on very distortive taxes and if we want to raise tax revenue with as little distortion as possible, we often end up in a situation of adverse income distribution. This is dealt with when we discuss optimal taxation.

Another part of the course deals with income redistribution in terms of not only taxes, but also benefits. We discuss the reasons for redistribution as well as what wants to equalize - outcomes or opportinities. Also in this matter the theoretical aspects are accompanied by practical examples.

The course will also cover aspects of collective decision making and the role of government.

Learning outcomes

Upon completion of the course the student should

1. have a good understanding of the economic rationale for having a public sector,
2. have a good understanding of the subjects presented during the course,
3. be able to link the different subjects to each-other and draw own conclusions about more complex public economics problems.

Information and Strategies, 7.5 higher education credits

The course Information & Strategies is a continuation of the course Advanced Microeconomic Theory, introducing some more realistic elements to the analysis of how markets work. We will acknowledge that peoples’ choices are often interdependent, in the sense that one person’s best choice often depends on what other people do, as well as the fact that people often lack all the information they need to make their decisions.

The course is divided into two parts. The first part is focused on the basic market forms (monopoly, oligopoly, bargaining and auctions) and also introduces basic game theory (normal form games, extensive form games), including some games of incomplete information. The second part of the course is focused on the internal operation of firms and organizations and also introduces basic contract theory.

Learning outcomes

When you have completed the course, you will have basic knowledge about:

1. How markets and firms operate under imperfect competition and incomplete information.
2. How the modern analytical tools of game theory and contract theory may be applied to study markets and firms.

Mathematics, 7.5 higher education credits

After completing the course the students will be able to understand the main mathematical concepts in Economics and Finance. The course includes the following items: (i) Linear Algebra, (ii) Differential Calculus, (iii) Integral Calculus, (iv), Static Optimization, and (v) Probability

Learning outcomes

By the end of the course, students should be able to:

1. Solve and analyze optimization problems in several variables, both unconstrained and constrained, including inequality constraints.
2. Solve systems of linear equations.
3. Demonstrate a working knowledge of MatLab and elementary programming.

Advanced Derivatives, 7.5 higher education credits

The overall objective of the course is to give advanced knowledge and insight into the valuation of derivative securities and modern risk management practices. The objective invilves a general overview of advanced pricing theory as well as advanced uses of derivative securities for purposes of reducing various types of investment risk.

Learning outcomes

By the end of the course, students should be able to:

1. understand and use advanced mathematical and statistical methods commonly used by derivative traders and professional investors to value derivative securities.
2. understand and use advanced techniques commonly used by derivative traders and professional investors to effectively hedge investment risk using derivative securities.
3. have an insight into the application of the methods and techniques used by derivative traders and professional investors for purposes of advanced understanding of derivative valuation and modern risk management practices.

Investments, 7.5 higher education credits

This course covers different aspects of financial decision-making under uncertainty and focuses on the link between Asset Pricing and Portfolio Choice. It introduces the following fundamental concepts in a finite-dimensional framework:

- Uncertainty and state/preferences, savings vs. consumption, and risk-aversion.
- Supply and demand, equilibrium, the capital asset pricing model, pricing kernels.
- Market incompleteness, investor asymmetry, investment advice.

Often, text-books and course syllabi at the Masters level treat only basic portfolio choice models, such as mean-variance optimization. The focus in this course is on finite dimensional state/preference models, which

enables a simultaneous analysis of both asset pricing and portfolio choice.

Learning outcomes

Upon completion of the course the student should:

1. have a good understanding of how individual state/preference investors form their optimal portfolios.
2. have a good understanding of how individual decisions lead to models for market equilibrium asset prices.
3. be able to analyze the effects that asymmetries (differences in investors´ situation and informational differences) have on investor choices and market equilibrium.

Behavioural Finance, 7.5 higher education credits

This course covers a broad range of issues in behavioural finance. Its central theme will be the 'efficient market hypothesis' (EMH), one of the cornerstones of modern finance. Special emphasis in this course is given to experimental studies. To deepen the knowledge and understanding of the functioning of financial markets, both paper and pencil and computerized market experiments are run during the course with near-to-reality market designs. In particular, the course consists of the following connected themes which all are related to the efficiency of markets.

The first part investigates the drivers of bubble formation on financial markets. Therefore, experiments will be run to detect environments which fuel or diminish bubbles on asset markets.

Furthermore, the course sheds some light onto the performance of different groups of investors like insiders, mutual fund managers, etc. and thus covers the value of their private information. It will be investigated whether they are able to outperform the market which would mean that the market prices do not fully incorporate their information. Related to this, the course will also cover the forecasting performance of experts in general and on financial markets. Finally, experiments with asymmetrically endowed investors will be run and analyzed in class to observe differences in returns and behaviour among the different trader groups.

Another topic centers around the discussion of implementing a transaction tax in foreign exchange markets (so called ‚Tobin Tax). By taking a look at recent studies and by running own experiments, questions on the impact of a Tobin Tax on market volatility, market efficiency and trader behaviour will be answered.

Learning outcomes

Upon completion of the course the student will:

1. have a good understanding of the functioning of markets and the mechanism of price formation.
2. have a good understanding of the efficiency of real-world financial markets and its implications.
3. be able to replicate other and conduct own studies on market efficiency.

Private Equity Finance and Law, Part 1, 7.5 higher education credits

In Private Equity Finance and Law the focus is on macro perspectives and deals with private equity, flow of funds, and industry restructuring. The students will also learn the legal structures and construction facilitating the flow of funds, and the exchange of intellectual property, so called IPRs.

The course starts by explaining the role of households in securing future consumption we also explain the role of financial intermediaries facilitating entrepreneurial activity, both from a financial and a legal perspective creating a market for ideas.

The course mixes conceptual presentation, empirical tests and observations, and practical hands on techniques. It takes materials from financial economics and from the practice of private equity and venture capital funds. The course also uses real case studies including legal contracts, valuation of firm performance,

due diligence procedures, and financial reporting, including managerial aspects such as asymmetric information and agency costs.

Learning outcomes

Upon the completion of the Private equity finance and law, the student will be able to:

1. demonstrate knowledge and understanding of the macro economics and macro finance environment in which money is transferred from savers to investors in high risk capital.
2. demonstrate knowledge and understanding of the modus operandi of the private equity and venture capital industry in Sweden and in the world.
3. demonstrate knowledge and understanding of the role of financial intermediaries and the relation to economic growth.
4. show understanding of the regulation of the transfer of a firm.
5. Show understanding of the legal consequences and risks that different legal alternatives might have when it comes to transfers of firms.
6. show understanding concerning the importance of a critical approach to phenomena that occur in the practice of transfers of firms, and also the importance of constructive thinking in that area.

Project Paper with Discussant, 15 higher education credits

The paper can be written in Swedish or in English, either parallell with the elective course during a whole semester or during a semester's second half. The objective is to give practice in independent analysis of economic problems with help from economic theory and scientific method. The paper must be defended in a seminar. Besides defending one's own paper there is also responsibility to serve as discussant for someone else's paper. Thesis defence as well as discussion may be conducted in Swedish or in English.

Learning outcomes

By the end of the course, students should be able to independently analyze economic problems by:

1. formulating a problem that demands that the student har incorporated earlier courses in the matter.
2. clearly structuring the written project paper.
3. applying relevant economic theory and fundamental scientific methods.
4. using a clear and good language, which among other things require the ability of following the established grammatical and orthographical rules.
5. defending the paper at a seminar with the course participants.
6. giving constructive criticism on papers written by other students at a seminar with the course participants.
7. critically assess various kind of primary information.

6. Literature

See separate literature list.

7. Assessment

The examination consists of assigned work, short essays, and/or a final exam in written or oral form.

8. Grading scale

The grading scale comprises Fail (U), Pass (G), Pass with Distinction (VG).

For a final grade of Pass with Distinction the student must receive Pass with Distinction on the paper and on one course.

A student who has failed an exam twice has the right to request a change of examiner.

9. Course evaluation

The student will be requested to complete a course evaluation form at the end of the course.

10. Additional information

Language of instruction: English.

The Bachelor and Magister courses in Economics (NEG300, 30 higher education credits and NEA100, 30 higher education credits) are equivalent to the previous advanced courses C1 and D1 (NE4100 Economics: Advanced Level 1 and NE6100 Economics: Advanced Level 2.)