Linnæus University

Dnr: LNU-2024/2999

Programme syllabus

School of Business and Economics

Nationalekonomprogrammet, 180 högskolepoäng
The Economics Programme, 180 credits

Level
First cycle

Date of Ratification
Approved 2018-12-12.
Revised 2024-09-11.

The programme syllabus is valid from autumn semester 2025.

Prerequisites
General entry requirements + English 6, Mathematics 3b alt. Mathematics 3c and Civics 1b alt. Civics 1a1 +1a2.

Description of Programme

The Economics programme aims to educate students about how data, statistics and mathematics can be used to understand and shape the world around us. Studying Economics is of utmost importace in a globalised world where economic considerations and analyses are crucial for informed decision-making. The programme includes problem solving and data analysis with various statistical methods and software, which today is invaluable in many different professional fields. In addition, the programme offers different course packages such as in Financial data analytics, Data analysis of public policy and Business analytics. Students can also choose to read courses to obtain a Bachelor of Science in Business and Economics. The job market for economists is diverse and exciting, and students can work in professions such as market analysts, data analysts or investigators in the banking and finance industry, public authorities and large companies both in Sweden and internationally.

The programme is offered in two variants: one entirely in English and one in Swedish and English, which requires elegebility equivalent to Swedish 3.

Objectives

Central degree objectives in accordance with the Higher Education Ordinance

Knowledge and understanding
For a Degree of Bachelor the student shall

- demonstrate knowledge and understanding in the main field of study, including knowledge of the disciplinary foundation of the field, knowledge of applicable methodologies in the field, specialised study in some aspect of the field as well as awareness of current research issues.

Skills and abilities
For a Degree of Bachelor the student shall

- demonstrate the ability to search for, gather, evaluate and critically interpret the relevant information for a formulated problem and also discuss phenomena, issues and situations critically
- demonstrate the ability to identify, formulate and solve problems autonomously and to complete tasks within predetermined time frames
- demonstrate the ability to present and discuss information, problems and solutions in speech and writing and in dialogue with different audiences, and
- demonstrate the skills required to work autonomously in the main field of study.

Judgement and approach
For a Degree of Bachelor the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues
- demonstrate insight into the role of knowledge in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the need for further knowledge and ongoing learning.

Programme specific objectives

- apply core economic concepts, principles and theories
- apply quantitative reasoning skills for economic analysis and evaluate economic arguments.

This is in accordance with the intended learning outcomes set for a bachelors' degree in the Swedish Higher Education Ordinance and School of Business and Economics' mission.

Content

Organisation
The programme is placed and taught at the School of Business and Economics.

The programme has a Programme Director who has overall responsibility for the programme and who serves as a representative of the programme and coordinates programme-related issues. The Director is responsible for the programme's content and development and works actively to maintain good relations and communication channels. This takes place with the programme's teaching staff by means of continuous dialogue, with the programme's students through a programme council, and with trade and industry through collaboration and interaction with relevant stakeholders.

Programme overview
The programme starts with introductory courses in economics and statistics. During the third and fourth semester, courses in economics that are aimed at applying economic theory and evaluation to economic policy are given. During the fifth semester the students have the opportunity to choose between a number of elective course packages in economics or business administration, broaden their knowledge of other disciplines, alternatively, a semester of studies abroad. The course package in business economics is only available primarily in Swedish as the language of instruction and requires elegebility equivalent to Swedish 3. The sixth semester consists of courses in economics aimed at the in-depth level including a degree project consisting of 15 higher education credits.

Mandatory courses within the programme can, in agreement with the Director, be exchanged. The Programme Director will then be responsible for assessing whether the central degree objectives still can be met, despite the course exchange. Courses within the programme might be given in english.

Programme courses

Semester 1

• Microeconomics, 15 cr, G1N (mandatory)*,

The course introduces basic microeconomic theory about the behaviour of consumers and producers in the markets for production factors, goods and services, and the consequences of various market forms, market interventions and market failures.

• Macroeconomics, 15 cr, G1N (mandatory)*,

The course gives introduction to basic concepts in macroeconomics and the relationships between macroeconomic variables. It also introduces models for long-term economic growth as well as short-run fluctuations in economic activity and how stabilisation policy can affect these variations.

Semester 2

• Basic Statistics for Business and Economics 7.5 credits, G1N (mandatory),

The course aims to provide with the ability to use computer programmes to interpret, summarise and present random samples to draw conclusions about a population. Elementary probability concepts, random variables and quantification of uncertainty are included as central concepts.

• Statistical methods for business and economics, 7.5 credits, G1N (mandatory),

The course covers various statistical methods such as correlation, multiple linear regression, time series analysis, non-parametric methods and sampling methodology for surveys. The course provides with insight in how to choose an appropriate model for a given statistical problem and analyse and present the results of a statistical analysis.

• Survey analysis and Quantitative methods, 15 credits, G1F (mandatory),

The course is divided into two modules where the first module covers various multivariate methods and survival analysis which gives the student the skills to explore the relationships between variables, identify important factors or components, classify observations in groups and make forecasts or interpretations based on data. The second module covers sampling methodology and provides the student with the knowledge to be able to plan and evaluate various types of statistical sampling surveys.

Semester 3

• Essential mathematics for business and economics, 7.5 credits, G1F (mandatory)*,

The course introduces students to the mathematical toolbox of economists. As a future economist, analyst, or consultant, you are expected to express concrete problems in the language of mathematics and understand and work with mathematical models, e.g., to use software to analyze and solve problems. The course covers topics such as optimization, functional analysis, linear algebra, derivatives, and integrals, including fundamental calculations from the world of finance.

• Econometrics, 7.5 cr, G1F (mandatory)*,

The course focuses on the linear regression model using the least squares method. The course provides both theoretical perspectives as well as practical examples. The properties of the linear regression model and how to make valid inference are discussed, including model specification and diagnostic tests. Pure time series models such as ARIMA and ARCH / GARCH are introduced together with tests for stationarity and cointegration.

• Uncertainty and strategic decision making, 7.5 credits, G1F (mandatory)*,

The course covers fundamental concepts related to uncertainty (such as risk, probability, and ambiguity) and utilises game theory and other analytical tools to understand strategic thinking and explore decision-making under uncertainty in various business- and economic contexts.

• Economic growth and business cycle, 7.5 credits, G1F (mandatory)*,

The course covers models for long-term economic growth as well as static and dynamic models for short-term fluctuations and stabilisation policy in an open economy. Models and theories are treated mathematically and graphically, and assumptions and forecasts are compared with empirical observations.

Semester 4

• Environmental Economics and Resource Allocation, 7.5 cr, G1F (mandatory)*,

The course covers basic concepts that are required in order to discuss, analyse and solve environmental and resource allocation problems. Various economic mechanisms and instruments are analysed, based on microeconomics and behavioural economics.

• International Economics and Finance, 7.5 credits, G2F (mandatory)*,

The course covers analysis of international financial markets and institutions with focus on practical aspects, opportunities and challenges that multinational businesses face around international investments and exchange rates.

• Public Economics and the Welfare State, 7.5 credits, G2F (elective)*,

The course studies the state's role in the economy. Central questions that are addressed are how taxes and subsidies should be designed to achieve an efficient resource allocation, what a market failure is, how the state can intervene to correct market failures and what effects such interventions have on the welfare of individuals.

• Academic Writing in Practice, 7.5 credits, G1F, (elective)*,

The course aims to strengthen and improve students' writing skills for practical use in both work and further studies, including when writing a bachelor thesis or research idea. The course includes reading, analysis and discussion of academic, popular science and policy-based texts.

The elective courses below require elegebility equivalent to Swedish 3.

Students who want to study course package 5 (Bachelor of Science in Business and Economics) during semester 5 are recommended to choose Introduction to Management and Financial Accounting during semester 4. Please note that 30 credits in business administration are required to obtain a Degree of Bachelor of Science in Business and Economics.

• Introduction to Management, 7.5 credits, G1N (elective),

The course introduces the subject of management with focus on conceptual understanding and knowledge of basic theoretical models for internal management.

• Financial Accounting, 7.5 credits, G1N (elective),

The course aims for the student after completing the course to be able to book commonly occurring business events, prepare simple financial statements, explain the basics of cash flow analysis as well as prepare simpler cash flow analyses. The student must be able to describe external accounting legislation, standards, principles and the standard-setting process, as well as be introduced to normative accounting theory.

Semester 5

• Elective course packages, other subject studies or semester abroad (30 credits).

During the semester, the students can choose one of four course packages of 30 credits; financial data analysis, data analysis for public policy; business analytics and Bachelor

of Science in Business and Economics (the course package Bachelor of Science in Business and Economics is only available with Swedish as the language of instruction and requires elegebility equivalent to Swedish 3), alternatively other subject studies or completing a semester at another university abroad.

Course package 1: Financial data analytics

Covers financial economics with an emphasis on the analysis of financial data

• Statistical data processing, 7.5 credits, G1F, (elective),

The course aims to give the student the skills to perform statistical analysis in various computer programs. The course is structured around a number of smaller projects, each designed to provide the student with skills in statistical analysis using a computer program.

• Statistical machine learning, 7.5 credits, G1F, (elective),

The course aims to provide an introduction to several different types of statistical models and machine learning-related concepts. The course deals with many case studies and practical examples to be able to apply statistical learning methods to applications in various fields.

• Portfolio Choice Theory, 7.5 credits, G1F (elective)*,

The course deals with how investors can create portfolios of risky assets and how prices are determined in the financial markets. Theoretical models such as the capital asset pricing model and pricing of shares and bonds.

• Topics in Analytical Finance, 7.5 credtis, G1F (elective)*,

The course introduces the students to various subjects within the latest financial research. Several areas are treated, for example asset pricing and cross-section of returns, investment and portfolio optimisation, sustainable finance, dependency structure and copulas as well as machine learning.

Course package 2: Data analysis for public policy

Covers how public policy can be evaluated by using the latest methods of data collection and analysis.

• Statistical data processing, 7.5 credits, G1F, (elective),

The course aims to give the student the skills to perform statistical analysis in various computer programs. The course is structured around a number of smaller projects, each designed to provide the student with skills in statistical analysis using a computer program.

• Statistical machine learning, 7.5 credits, G1F, (elective),

The course aims to provide an introduction to several different types of statistical models and machine learning-related concepts. The course deals with many case studies and practical examples to be able to apply statistical learning methods to applications in

various fields.

• Introduction to Economic Policy Analysis with Big Data, 7.5 credits, G1F, (elective)*,

The course provides an overview of basic methods for evaluating causal effects of various political reforms linked to current issues in the social debate. Examples include reforms of schools, social insurance systems, the judiciary and environmental policy.

• Managing big data for Economic Policy Analysis, 7.5 credits, G1F, (elective)*,

The course is about the practical use of big data to evaluate public policy. Issues addressed include how big data is collected and processed, the meaning of measurement error, replication and presentation of research findings.

Course package 3: Business analytics

Addresses the role data plays and is used in decision-making processes in businesses and organisations.

• Statistical data processing, 7.5 credits, G1F, (elective),

The course aims to give the student the skills to perform statistical analysis in various computer programs. The course is structured around a number of smaller projects, each designed to provide the student with skills in statistical analysis using a computer program.

• Statistical machine learning, 7.5 credits, G1F, (elective),

The course aims to provide an introduction to several different types of statistical models and machine learning-related concepts. The course deals with many case studies and practical examples to be able to apply statistical learning methods to applications in various fields.

• Data visualisation, 7.5 credits, G1F, (elective),

The course focuses on introducing basic principles and strategies for visualizing and interpreting data, as well as the application of modern visualization tools in the R software.

• Data-driven decision making, 7.5 credits, G1F, (elective)*,

The course prepares the students to make informed and data-driven decisions in professional and private contexts The course includes theoretical concepts, practical exercises and case studies, which provides with a thorough understanding of the role of data in decision making.

Course package 4: Bachelor of Science in Business and Economics (requires elegebility equivalent to Swedish 3)

Courses in business administration and legal science

• Commercial Law I, 15 credits, G1N (elective),

The course provides a basic overview of the Swedish legal system and primary insights into EU law. It mainly covers civil law and property law frameworks such as contract law, sales law, family law, intellectual property law and other regulations that affect the relationship between individual physical and legal entities. The emphasis of the course is on teaching students to handle various legal sources and being able to investigate legal issues independently.

• Management Accounting and Investment Appraisal 7.5 credits, G1F (elective),

The course provides basic skills in product costing, internal accounting and investment assessment. The course also covers how management has changed over time, with an emphasis on newer ideas in the development.

• Finance and Analysis 7.5 credits, G1F (elective),

The course covers financial planning, capital markets, financial theory and risk management.

or,

• Elective subject studies/semester abroad 30 credits,

During the semester, the students can choose to specialise in another subject than economics or complete a semester of studies abroad. The students are encouraged to explore the comprehensive range of agreements with foreign educational institutions available within Linnaeus university. The prerequisites for courses as well as the local regulations for degrees at Linnaeus university must always be met.

Semester 6

• Labour Economics, 7.5 credits, G2F (mandatory)*,

The course provides with knowledge about how the labour market functions and how various institutional conditions and labour market policies affect wages and employment. The students are trained to use mathematical and graphical methods to derive and analyse central relationships in the labour market.

• Economics of Migration, 7.5 credits, G2F (mandatory)*,

The course covers the causes and consequences of international migration. The students are trained to apply theoretical models and empirical methods to analyse of various issues in the field of migration. The course has a clear research connection and provides with training and skills in reading, summarising and discussing scientific articles.

• Economics, Degree Project (Bachelor), 15 credits, G2E (mandatory)*,

The independent degree project is based on knowledge and skills acquired in previous courses. The degree project involves independently formulating a research question and conducting a study whose results are presented in the form of an academic thesis. The course trains and develops the students' ability to conduct an analysis on scientific basis. In the independent project, the students must demonstrate knowledge and understanding of economic theory and method, the ability to independently analyse a question based on relevant theory and method as well as, with a critical approach,

interpret, evaluate and discuss the results of the study.

Some of the courses in the programme are studied together with students from other programmes and single subject courses, and may be taught in a different order.

* course in the main field of study, Economics,

A Bachelor’s programme of 180 credits must, in accordance with the Higher Education Ordinance, contain at least 90 credits of specialised study in the main field, of which a degree project of at least 15 credits. For additional information, see the local system of qualifications. Courses previously given within the same programme code, EGNEK, can also be included in the programme degree and thus replace courses with equivalent content.

Societal relevance
The economics programme teaches students to tackle real-world problems using different analytical and quantitative methods. The education programme helps in fostering an understanding of the objectives and constraints involved in the decision-making of individuals, firms, organisations and governments. Our graduates continue their studies on more advanced education programmes, as well as building careers within the private and public sectors, including government authorities, research institutes and international organisations.

Internationalisation
Students are encouraged to study abroad during their fifth semester. The students will be offered the opportunity to make use of the collective offerings made possible with the exchange agreements Linnaeus University has entered into with foreign educational institutions. Students are also encouraged, if they so wish, to find universities outside the existing agreements.

Sustainable societal development
A social, ethnic and cultural diversity is central to a successful economics programme. In some of our courses, we analyse how ethnic background, gender, sexual orientation and social class influence the outcome, for example, at work. In the programme, students with different backgrounds meet, creating an opportunity for a unique educational experience through the exchange of ideas. In our applications of economic theories, a sustainability perspective permeates in different contexts. For example, an analysis of environmental problems and possible solutions to the problems in a globalised world is fundamental in several of our courses. The programme uses conscious teaching and examination methods that stimulate students' ability to analyse, think critically, abstraction and theorising.

Quality Development

Continuous evaluation and improvement of the programme takes place, among other things, through the University’s course evaluations, where the results are handled by the Programme Director and programme council and feedback is then provided to students and archived. Programme students actively participate in the follow-up and development of the programme through the programme council and through student representatives in the faculty-wide education council.

All programmes of the School of Business and Economics also undergo a quality analysis based on the standards of the Association to Advance Collegiate Schools of

Business (AACSB), and quality evaluations are conducted for all main subjects through the national quality assurance system with the help of UKÄ (Swedish Higher Education Authority). The School of Business and Economics' faculty-wide quality plan requires, among other things, that a recurrent programme analysis is conducted and that course evaluations are monitored. As part of the annual university-wide survey, the Linnaeus Barometer, students are asked about their experiences of their education in terms of different quality aspects.

Degree

After completing programme studies, corresponding to the requirements expressed in the Higher Education Ordinance as well as the Linnaeus University degree order, the student may apply for a degree. Those who have completed the Economics programme may obtain the following degree:

Bachelor of Science
Main field of study: Economics

Filosofie kandidatexamen
Huvudområde: Nationalekonomi

Students who meet the requirements for the designation in Business and Economics can obtain the following degree:

Degree of Bachelor of Science in Business and Economics
Main field of Study: Economics

Ekonomie kandidatexamen
Huvudområde: Nationalekonomi

The degree certificate is bilingual (Swedish/English). The Degree Certificate is accompanied by a Diploma Supplement (English).

Other Information

The eligibility requirements for the courses within the programme must be met before the course starts. The requirements are stated in the course syllabus. If the language of instruction for the course is English the examinations of the course is conducted in English.

In the event of any discrepancies between the Swedish and the English version of this programme syllabus, the Swedish version shall prevail.