



Program: Logistics and Management, 180 credits

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Industrial organization and economics with specialization in logistics and management. The education aims to give students a good position in the labor market. During the education, they receive broad knowledge in industrial economics, business logistics, production and material flow analysis, organization, leadership, project management, quality management, purchasing and supplier relations, production logistics and distribution logistics, which provides a good foundation for analysing and improving processes. They have also completed three mathematics courses in algebra, one-variable analysis and mathematical statistics.

When students go out to work in private or public sector during semester 4, they will have acquired the following knowledge within each course:

Business logistics

- Analyzing logistics key figures
- Costs and capital utilization
- Inventory level analysis
- Order quantities
- Basic materials management methods

Lean business development

- Material supply systems
- Process mapping
- Value stream analysis
- Production layout
- Lean tools, 5S
- Production and materials analysis

Business strategy

- Business management
- Business strategy content
- Business performance
- Business strategy alternatives
- Substrategies to business strategy
- Business strategy process

Purchasing logistics

- Purchasing processes/organizations
- Tools linked to purchasing
- Total cost of ownership
- Negotiation techniques
- Supplier relations
- Supplier evaluation and development

Industrial economics

- Product costing
- Investment costing
- Profitability assessment
- Variance analysis
- Budgeting and monitoring
- Accounting

Retail

- Retail logistics
- E-commerce
- Distribution systems
- Customer management
- Location analysis
- Third-party logistics

Mathematical statistics

- Basic probability theory
- Descriptive statistics
- Identifying correlations
- Investigation relationships, analyzing measured data and evaluating the results

Flow planning and control

- Sales and operations planning
- Forecasting and customer orders
- Basis for delivery promises
- Customer order control
- MRPII, takt and bottleneck-based planning and control

Management and leadership

- The managerial role: requirements and expectations
- Relationship between employer and employee
- Swedish labor law, collective agreements, employee organizations, the Swedish model
- Work environment (physical and psychosocial), equality and equal treatment
- Recruitment, employment and termination of employment
- Vision, business concept, strategy and organization as management tools
- Human conditions for work and work design: physiological load, physical work environment aspects, cognition, work organization, stress, shift work

Project management methodology

- Projects as a form of work
- Project stages and project models

- The project manager role – organization and activation within projects
- Project management methodology
- General project documents
- Project tools for planning and follow-up
- Project calculation and budgeting
- Social and environmental aspects in project management

One-variable analysis

- Definition of the elementary functions
- General theory of functions
- Equations and inequalities, complex numbers
- The concept of limit values
- Continuity
- Definition of the derivative with geometric interpretation, differentiation rules
- Applications of the derivative such as optimization problems and graphing
- Introduction to numerical equation solution
- Primitive functions and integrals, integration methods
- Taylor's formula, series expansions
- Ordinary differential equations

Linear algebra

- Linear systems of equations, Gauss elimination
- Vector algebra with geometric applications
- Matrices and matrix algebra
- Determinants with applications
- Bases and changes of basis
- Eigenvalues and eigenvectors, diagonalization, Markov processes
- Use of computer software for vector and matrix calculations