



## Program: Sustainable Supply Chain Management, 180 credits

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The program aims to provide students with a deep knowledge of the design, planning and control of supply chain and industrial operations. Specifically, the program aims to provide the students with solid understanding of sustainability issues in the various levels of contemporary supply chains, from purchasing and supply to production, distribution and retailing. The issues include environmental, social and economic aspects, as well as planning for successful leadership and management of organizations.

**Prior to the Industrial Placement Course (IPC) in semester 4, the students have taken courses in:**

### Logistics engineering

- The logistics system
- Materials planning and control
- Inventory management

### Principles of sustainable supply chain management

- Introduction to sustainability in supply chains
- Reverse logistics and recycling
- Sustainable warehousing and transport

### Basic calculus

- Mathematical reasoning, logic, and problem solving
- Elementary functions, derivatives and integrals
- Limits and continuity

### Research methods and communication

- Finding and reviewing scientific articles
- Critical review of scientific work
- Oral presentation

### Transportation and warehousing

- Warehousing and storage
- Material handling
- Packaging logistics
- Transportation planning

### Sustainable business relationships

- Business to business marketing
- Sustainable businesses
- Stakeholder relationships

### Retailing

- Retail operations
- E-commerce and multi-channel retailing
- Distribution structures

**Lean and green engineering**

- Lean principles and wastes
- Value stream mapping
- Time studies

**Linear algebra and optimization**

- Matrices and matrix algebra
- Linear programming
- The simplex method and sensitivity analysis

**Leadership and project management**

- Group dynamics and leadership
- Project management

**Quality management and engineering**

- Total quality management (TQM)
- Practical applications of QM tools
- Supplier relationship management

**Industrial finance and controlling**

- Product calculation
- Budgeting
- Investment calculation
- Profitability calculation