



JÖNKÖPING UNIVERSITY

School of Engineering

Student Competence
Industrial Engineering and Management (Sustainable Supply Chain Management)

Program Manager: Hamid Jafari

The program aims to provide students with a deep knowledge of the design, planning and control of logistics 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 human factors, as well as planning for successful leadership and management of organizations.

Prior to the Industrial Placement Course in Industrial Engineering and Management (12 credits) in semester 4, the students have received training in:

YEAR 1	Introduction to Logistics and Materials Management <ul style="list-style-type: none">- The Logistics System- Materials Planning and Control- Inventory Management	Principles of Sustainable Supply Chain Management <ul style="list-style-type: none">- Introduction to Sustainability in Supply Chains- Reverse Logistics and Recycling- Sustainable Warehousing and Transport	Basic Calculus <ul style="list-style-type: none">- Mathematical Reasoning, Logic and Problem Solving- Elementary Functions, Derivatives and Integrals- Limits and Continuity	Business Planning and Entrepreneurship <ul style="list-style-type: none">- Developing a Business Plan- Investment, and Profitability Calculation- Entrepreneurship Principles
	Research Methods and Communication <ul style="list-style-type: none">- Formulating a Research Report- Critical Review of Scientific Work- Oral Presentation Skills	Leading Sustainable Organizations <ul style="list-style-type: none">- Organizational Structures- Group Dynamics and Leadership- Project Management	Operations and Quality Management <ul style="list-style-type: none">- Total Quality Management (TQM)- Design of Experiments- Statistical Process Control	Linear Algebra and Optimization <ul style="list-style-type: none">- Matrices and Matrix Algebra- Linear Programming- The Simplex Method and Sensitivity Analysis

YEAR 2	<i>Lean and Green Logistics</i> <ul style="list-style-type: none"> - <i>Lean Principles and Wastes</i> - <i>Value Stream Mapping</i> - <i>Time Studies</i> 	<i>Corporate Social Responsibility</i> <ul style="list-style-type: none"> - <i>Stakeholder Analysis</i> - <i>Implementing and Communicating a CSR Strategy</i> - <i>Corporate Ethics and Philanthropy</i> 	<i>Purchasing and Supply Chain Management</i> <ul style="list-style-type: none"> - <i>Purchasing and Strategic Sourcing</i> - <i>Legal Aspects and Contract management</i> - <i>Supplier Relationship Management</i>
	<i>Mathematical Statistics</i> <ul style="list-style-type: none"> - <i>Basic probability theory</i> - <i>Descriptive statistics</i> - <i>Hypothesis testing</i> 		<i>Retailing</i> <ul style="list-style-type: none"> - <i>Retail Operations</i> - <i>e-Commerce and Multi-Channel Retailing</i> - <i>Distribution Structures</i>