JÖNKÖPING UNIVERSITY
School of Engineering

2020-10-21

Student Qualifications for IPC

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 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, economic and social 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:

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

Mathematical Statistics

- Basic Probability Theory
- Descriptive Statistics
- Hypothesis Testing

Research Methods and Communication

- Dissecting a scientific article
- Critical Review of scientific work
- Oral Presentation and communication skills

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

- Organizational Structures
- Group Dynamics and Leadership
- Project Management

Business Planning and Entrepreneurship

- Developing a Business Plan
- Investment, and Profitability Calculation
- Entrepreneurship Principles

Quality Management and Engineering

- Total Quality Management (TQM)
- Practical application of QM tools
- QM and sustainability

Purchasing

- Purchasing and Strategic Sourcing
- Legal Aspects and Contract management
- Supplier Relationship Management