



COURSE SYLLABUS

Lean and Green Engineering, 7.5 credits

Lean och grön teknik, 7.5 högskolepoäng

Course Code:	TLGK16	Education Cycle:	First-cycle level
Confirmed:	Feb 18, 2025	Disciplinary domain:	Technology
Valid From:	Aug 31, 2026	Subject group:	Industrial Engineering and Management
		Specialised in:	G1F First cycle, has less than 60 credits in first-cycle course/s as entry requirements
		Main field of study:	Industrial Engineering and Management

Intended Learning Outcomes (ILO)

On completion of the course the student shall:

Knowledge and understanding

- demonstrate comprehension of lean principles and their evolution
- show familiarity with synergies between lean and sustainability issues in supply chain management
- display knowledge of sources of value creation in green logistics

Skills and abilities

- demonstrate skills of critically analyze and evaluate supply chains using value stream mapping
- demonstrate skills of evaluate alternatives for eliminating wastes in sustainable supply chains

Judgment and approach

- demonstrate an understanding of systems thinking regarding supply chains
- demonstrate the ability to evaluate wastes and plan for closed-loop supply chains

Content

The aim of this course is to provide knowledge of lean principles in a supply chain setting. The course focuses on the nexus of the lean philosophy and sustainability in logistics and supply chain management.

The course includes the following elements:

- Principles of lean and its main tools including 5S
- Value Stream Mapping and improvement
- Time studies
- Lean and green issues in supply chain collaboration
- Business Process Management
- Systems thinking

Type of instruction

Teaching comprises of lectures, seminars and project work.

Language of instruction is in English.

Entry requirements

General entry requirements and taken course Principles of Sustainable Supply Chain Management, 7,5 credits (or the equivalent).

Examination and grades

The course is graded 5, 4, 3 or U.

The final grade for the course is based upon a balanced set of assessments. The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Written examination	4 credits	5/4/3/U
Project Work	2 credits	5/4/3/U
Seminars	1.5 credits	G/U

Course literature

Please note that changes may be made to the reading list up until eight weeks before the start of the course.

JeffreyK. Liker (2004) The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer, McGraw-Hill, ISBN:978-0-07-143563-5(e-book), 978-0-07-139231-0(printed version)