



## COURSE SYLLABUS

# Lean and Green Engineering, 7.5 credits

*Lean och grön teknik, 7,5 högskolepoäng*

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<b>Course Code:</b> TLGK19	<b>Education Cycle:</b> First-cycle level
<b>Confirmed by:</b> Dean Jun 1, 2019	<b>Disciplinary domain:</b> Technology
<b>Revised by:</b> Director of Education Jun 28, 2022	<b>Subject group:</b> IE1
<b>Valid From:</b> Aug 1, 2022	<b>Specialised in:</b> G1F
<b>Version:</b> 2	<b>Main field of study:</b> Industrial Engineering and Management

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### Intended Learning Outcomes (ILO)

After a successful 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

Judgement and approach

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

### Contents

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.

The teaching is conducted in English.

### **Prerequisites**

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

### **Examination and grades**

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

The final grade for the course is based on written examination and project work. The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

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

### **Course literature**

The literature list for the course will be provided 8 weeks before the course starts.

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)