Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Engineering

1MT010 Produktionsteknik - Principer för lean produktion, 7,5 högskolepoäng

Principles of Lean Production, 7.5 credits

Main field of study
Mechanical Engineering

Subject Group
Mechanical Engineering

Level of classification
First Level

Progression
G1N

Date of Ratification
Approved by Organisational Committee 2009-07-24

The course syllabus is valid from spring semester 2010

Prerequisites
General entry requirements. Basic eligibility

Expected learning outcomes

The students will :
1) Understand the meaning of efficient and effective operations.
2) Know lean manufacturing philosophies and tools in a production environment that incorporates the reduction of waste.
2) Be familiar with the basic methodology and appropriate tools of manufacturing problem solving and continuous improvement.

Content

The course consists of the following elements:
1) Basic introduction of operations and supply management
2) How to gain competitive advantages.
3) How production processes can be organised
4) Six-Sigma Quality
5) Strategic sourcing
6) Logistics
7) An overview of lean manufacturing methodologies such as JIT (Just in Time), 5S, visual management, zero defect quality

control, TPM, setup reduction, continuous improvement (kaizen).

Type of Instruction

Teaching consists of lectures, group-work, laboratory work, submitted assignments, seminars and case studies (projects).

Examination

The course is assessed with the grades U,3,4 or 5.
The students' performance can be evaluated through assignments, small written exam(s), seminars, written reports of project work (case studies), presentation and opposition and written and/or oral exam of the compulsory work.

Course Evaluation

When the course has finished, an evaluation is compiled. The results are reported to the students and then archived according to the rules of the school.

Required Reading and Additional Study Material

Required reading

F. Robert Jacobs and Richard B. Chase. Operation and Supply Management: The core, McGRAW-HILL , latest edition. 250 p.

James P. Womack, Daniel T. Jones, and Daniel Roos. The machine that changed the world. Simon & Schuster, latest edition.
339 p.

Relevant articles