



## Course syllabus

Faculty of Technology

Department of Mechanical Engineering

2SE015 Livscykelkostnadsanalys, 7,5 högskolepoäng

Life Cycle Cost Analysis, 7.5 credits

### **Main field of study**

Total Quality Maintenance

### **Subject Group**

Industrial Engineering and Management

### **Level of classification**

First Level

### **Progression**

G2F

### **Date of Ratification**

Approved by Faculty of Technology 2014-10-03

The course syllabus is valid from autumn semester 2015

### **Prerequisites**

Basic eligibility and Mathematics/Mathematical Statistics comparable to Computational Methods for Technical Applications (1MA112), 15 Credits, Business Driven Quality Maintenance, 7,5 Credits and additional 37,5 Credits in the subject Total Quality Maintenance.

## Objectives

After completing the course the student is expected to be able to:

- account for definitions, concepts, methods and tools of LCC/LCP in an industrial context, as well as their applications.
- exemplify application areas for definitions, concepts, methods and tools of LCC/LCP.
- understand how LCC/LCP can be used as decision making tool/method with regards (in complement) to technical/engineering performance.
- critically discuss choice of theory and method and the effects of the choice on the results

## Content

The course comprises the following elements:

- Introduction to the "time value of money"
- LCC components
- LCC models
- LCC as a decision making tool
- LCC applications in industry

## Type of Instruction

The teaching consists of lectures, group work, seminars, assignments and a case study.

## Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The examination is based on submitted reports and oral or written presentation of compulsory assignments.

In order to receive the grade Pass students must demonstrate knowledge that corresponds to the expected learning outcome.

## Course Evaluation

A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

## Credit Overlap

This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: 2SE014 Cost Analysis, 7,5 hec.

## Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Some elements of the course may entail costs defrayed by the course participant.

The course language is English if international students attend the course.

## Required Reading and Additional Study Material

### **Required reading**

Benjamin S. Blanchard, *Logistics engineering and management*, Prentice hall, latest edition. 526 pages.

Current scientific articles in addition

### **Recommended literature**

Hagberg, Leo & Henriksson, Tomas (1996). *Profitable maintenance: 8 steps to assured production. 4, The LCP methodology*. Stockholm: Mentor Communications

William G. Sullivan, Elin M. Wicks and James T. Luxhoj, *Engineering economy*, Pearson Education, latest edition. 450 pages.

Wolter J. Fabrycky and Benjamin S. Blanchard (1991) *Life-Cycle Cost and Economic Analysis.*, Prentice Hall