



MG1211 Industrial Operational Reliability 6.0 credits

Industriell driftssäkerhet

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

The official course syllabus is valid from the spring semester 2026 in accordance with the decision from the Faculty board of the ITM school: M-2024-0018. Date of decision: 2024-10-14.

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student shall be able to:

1. explain the factors that affect the availability and reliability of technical systems
2. characterise faults, their sources and distribution patterns in technical systems
3. carry out FMEA (Failure Mode and Effects Analysis) and RCM (Reliability Centered Maintenance) for a technical system
4. assess the maintenance characteristics of a piece of industrial equipment
5. analyse a technical system from a maintenance point of view to evaluate its performance, reliability and maintenance needs
6. identify, analyse and solve problems related to the reliability and maintenance of technical systems using commonly available tools.

Course contents

Basic operational reliability

Analytical methods for operational reliability

Examination

- INL1 - Homework Assignments, 1.5 credits, grading scale: P, F
- INL2 - Homework Assignments, 1.5 credits, grading scale: P, F
- TEN1 - Written exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.