SYLLABUS

Introduction to Operation and Maintenance Engineering - Basic 7.5 credits D0011B

Introduktion till drift- och underhållsteknik - grundbegrepp

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2021-02-17

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LULEÅ TEKNISKA UNIVERSITET

Introduction to Operation and Maintenance Engineering - Basic 7.5 credits D0011B

Introduktion till drift- och underhållsteknik - grundbegrepp

First cycle, D0011B

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Underhållsteknik	Other Subjects within Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language +
Swedish upper secondary school courses Physics 2, Chemistry 1, Mathematics 3c or Mathematics D.

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Course Aim

This course aims to provide students with general knowledge in Operation and Maintenance Engineering. After completing the course the student should:
• understand why maintenance is needed for technical systems
• demonstrate an understanding of dependability and how it can be improved
• be able to calculate availability and reliability
• be able to assess risks and have insight into human error within maintenance.
After completing the course module on gender equality, the student should show an understanding of the national gender equality goals, regulations for gender equality in professional life and give examples of the prerequisite for gender equality in professional life.

Contents

The course covers:
• Definitions and basic concepts
• Methods for Condition Monitoring
• Reliability calculations of series and parallel systems
• Maintainability of technical systems
• Human error within maintenance
• Maintenance support performance and calculation of Overall Equipment Effectiveness
• Life Cycle Cost analysis
• Risk Management
• Gender equality in the workplace.
• National gender equality goals and regulations

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
The course is conducted using pre-recorded theoretical elements followed by a discussion session, according to the "flipped classroom" concept. Students are to be preparing for the discussion sessions by following the assigned material. Active participation in class is expected. Compulsory attendance is required for presentations. The course module on gender equality consists of recorded lectures and literature.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Written examination and approved assignments. The course module on gender equality is examined through quizzes.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term “unauthorized aids” refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Course offered by

Department of Civil, Environmental and Natural Resources Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0003	Written exam	G U 3 4 5	4.5	Mandatory	A16	
0004	Assignment	U G#	3	Mandatory	A16	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2021-02-17

Syllabus established

by Eva Gunneriusson 2013-01-18