

Electromagnetic compatibility, 2,5 HE credits

Elektromagnetisk komabilitet, 2,5 hp

Established: 2020-12-17

Established by: Department of Engineering Science

Applies from: H21

Learning outcomes

Knowledge and understanding

The student must, after completing the course, be able to demonstrate an understanding of:

- how electromagnetic interference can be generated in an electric vehicle
- the negative effects of electromagnetic interference in an electric vehicle

Competence and skills

The student must, after completing the course, be able to demonstrate:

- skills in methods to reduce the impact of electromagnetic interference on components and systems of an electric vehicle
- the ability to analyze the electrical system of an electric vehicle from the perspective of EMC

Judgement and approach

The student must, after completing the course, be able to:

- demonstrate the ability to deal with the risks of electromagnetic interference in and from the electrical systems of an electric vehicle
- evaluate the eligibility of introducing a component in an electric vehicle, based on component descriptions

Entry requirements

General entry requirements and approved result from the following course/courses:

IKE100-Introduction to Electric Vehicle Systems and Components and

GEE100-Basics of Electrical Engineering for electric vehicles and

RSE100-Guidelines for safety when working on and in electric vehicles or the equivalent.

The forms of assessment of student performance

Individual written exam. Individual laboratory work with individual written laboratory report.

Course contents

Interaction between electromagnetic fields and electric circuits, transients, high frequency behavior, shielding and grounding.

Other regulations

Course grading: U/3/4/5

Course language: The teaching is conducted in English.

General rules pertaining to examination at University West are available at www.hv.se.

If the student has a decision/recommendation on special support due to disability, the examiner has the right to examine the student in a customized examination form.

Cycle

Second cycle

Progressive specialization

A1N - second cycle, has only first-cycle course/s as entry requirements

Main field of study

Mechanical Engineering