

Storage Systems in Electric Vehicles, 5 HE credits

Lagringsystem i elfordon, 5 hp

Established: 2021-02-25

Established by: Department of Engineering Science

Applies from: V22

Learning outcomes

Knowledge and understanding

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

- understanding of different storage media for electricity, especially regarding power density, delivered power, maintenance, cost, safety and environmental impact.
- understanding of basic principles and challenges with different charging principles.
- knowledge and understanding of current research and development work in storage media for electric vehicles.

Competence and skills

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

- skills in assessing the choice of storage media for electric vehicles.
- the ability to follow current research and development work in the area.

Judgement and approach

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

- relate to the choice of storage medium in terms of risks and accidents.
- evaluate when the own competence is required to be supplemented.

Entry requirements

General entry requirements and approved result from the following course/courses:
EFE600-Electric Machines for electric vehicles or the equivalent.

The forms of assessment of student performance

Individual written exam and individual written assignment.

Course contents

The course focuses on different storage media for electrical energy in electric vehicles. Different properties with focus on pros and cons for each media are presented as well as calculations regarding eg dimensioning and effect density.

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

A1F - second cycle, has second-cycle course/s as entry requirements

Main field of study

Mechanical Engineering