

Electrical Drive Systems, 5 HE credits

Elektriska drivsystem, 5 hp

Established: 2021-06-10

Established by: Department of Engineering Science

Applies from: V22

Learning outcomes

Knowledge and understanding

After completing the course, the student should be able to show in-depth knowledge about:

- electric drivelines.
- the subsystems within the electric driveline.

Competence and skills

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

- perform in-depth dimensioning calculations on components of an electric driveline.
- analyze the impact of different components on the electric driveline.
- orally and in writing clearly present and discuss his/her conclusions and the knowledge and arguments on which they are based in dialogue with different groups.

Judgement and approach

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

- demonstrate the ability to draw conclusions and assessments and show awareness of ethical aspects of research and development work in the field of electric drivelines.
- show insight into the possibilities and limitations of science, its role in society and people's responsibility for how it is used.

Entry requirements

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

EFE600-Electric Machines for electric vehicles and

EMK600-Electromagnetic compatibility or the equivalent.

The forms of assessment of student performance

Individual written assignment. Project assignment in group with written and oral presentation including individual opposition.

Course contents

The course focuses on conveying a holistic perspective regarding electric drivelines, where students gain an in-depth knowledge of how various systems and components of the electric driveline affect each other. Further, course focuses on training on in-depth dimensioning

calculations. Through a project work, knowledge in literature study and the ability to critically examine sources and knowledge in writing is gained.

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