Vak: Project Energy & Power Electronics — credits: 5

Vakcode	ELVB25PEPE
Naam	Project Energy & Power Electronics
Studiejaar	2025-2026
ECTS credits	5
Taal	Engels
Coördinator	N.A.A. al Geelani
Werkvormen	Projectonderwijs
Toetsen	Project Energy & Power Electronics - Opdracht

Leeruitkomsten

Realisation
The starting professional realizes and validates a (prototype of a) product/service/process based on an (electro)technical design and makes appropriate use of materials/techniques/instruments.
Management
The starting professional can professionally set up, define, implement, plan, adjust and deliver a small-scale project on time.

Professionalisation
The starting professional is able to acquire skills and keep them up to date, is self-managing, constructive in giving and receiving feedback, shows flexibility and can communicate clearly.

Inhoud

In this module, a project with and for the Professional Workfield on a topic in the field of energy and power electronics will be done.

Professional Products

- Energy-technical requirements for a (final) product – The technical specifications and preconditions required to design, implement and operate an energy-related system, plant or component according to the desired performance.
- System design – An overview of components and interactions between different components of a system. It includes the design of software and hardware architecture, components, interfaces, and data.
- Energy-technical simulations and calculations – The methods and processes by which the behaviour, performance and efficiency of energy-related systems or components are analysed and predicted. This includes the use of mathematical models, numerical methods and software tools.
- Accountability (document) – A report, presentation, or conversation in which the process of explaining and justifying decisions, actions, and results to stakeholders takes place. It shows how goals have been achieved and resources have been used, often with evidence to ensure transparency and trust. This can be done, for example, in the field of component selection, design choice or with the help of standardization or certification. *Additional Products will be delivered dependent on the specific project (e.g. risk analysis, test documentation, manuals etc.)*

Skills

Dependent on the project some skills will have more or less emphasis

- Practical skills (e.g. assembly, maintenance, measuring)
- Design skills (e.g. circuit design, design for EMC compatibility etc.)
- Project skills (e.g. problem definition, stakeholder analysis, planning, budgeting, etc.)
- Communication skills (e.g. presenting progress, cooperation, teamwork, feedback, etc.) Additional skills will be trained dependent on the specific project

Knowledge

- Dependent on the project, knowledge obtained in other courses of the Energy & Power Electronics modules will be deepened and applied. *Additional knowledge will be obtained dependent on the specific project*

Opgenomen in opleiding(en)

Exchange Energy & Power Electronics (autumn)
Minor Energy & Power Electronics

School(s)

Instituut voor Engineering

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