# Vak: Power2Hydrogen — credits: 5

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| **Vakcode** | RWVM23P2U |
| **Naam** | Power2Hydrogen |
| **Studiejaar** | 2026-2027 |
| **ECTS credits** | 5 |
| **Taal** | Engels |
| **Coördinator** | A. Perl |

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| **Werkvormen** | Onderwijs |
| **Toetsen** | Assignment 1 - Opdracht<br>Assignment 2 - Opdracht |

**Leeruitkomsten**

After completion of this module the student is able to:

1. Understand the main electrochemical concepts of electrical batteries, fuel cell and electrolysers.
2. Apply the electrochemical concepts in hydrogen-based renewable mobility options.
3. Analyse the driving range of renewable transport systems that use electrical batteries, hydrogen fuel cell and electrolysers.
4. Analyse the efficiency those systems.
5. Design and perform scientific experiments to analyse the performance of electrolysers and fuel cells.

**Inhoud**

Theory (3 EC):

- Electrochemistry basics
- Electrochemical storage - overview on electrochemical storage, including fundamentals of batteries and fuel cells. Limits and applications
- Electrolysis: theory and electrolyser design
- Fuel cells: theory and design

Experiments (2 EC):

- Electrolyser and fuel cell measurements

Adsorption (storage) measurements

**Opgenomen in opleiding(en)**

European Master in Renewable Energy

**School(s)**

Engineering, Life Sciences & ICT

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