Renewable Energery Technologies - Hydrogen

GT-005.01 Introduction / Basics of Electric Mobility and Hydrogen Economy

The participants will get a comprehensive overview and introduction on Hydrogen Economy and related applications. This can serve as a basis for decision taking in TVET in terms of adaptation of curricula, training programs and its implementation.

Learning outcomes

On completion of this course participants will be able to

- understand the main features of a hydrogen economy
- explain relevant features of sector coupling and its contribution to a sustainable and environmentally friendly economy
- describe the differences between a battery and fuel cell electric vehicle and the types of fuel cells and their application
- analyse the CO_2 and energy balance of electric vehicles
- describe recycling concepts for batteries and PEM fuel cells
- understand basics and application of electrolysis

Contents

- Hydrogen economy – potentials regarding climate change
- Electro mobility and its steps of development
- System design of a battery and fuel cell electric vehicle
- E-Fuels: basics, pros and cons
- Principles, types and different applications of fuel cells
- Deep Dive: PEM fuel cells
- Basics and application of electrolysis

Formats

Virtual format implemented with following main digital media (e-learning) elements:

- Learning Management Systems (Moodle etc.)
- Lectures/presentations via video stream (live or on demand)
- Collaboration and productivity software like MS 365 (Teams, Office) or Google Apps
- Group and one-on-one video calls for mentoring and discussion

The participant-centered and practical approach includes group and project work.

Language

- English
- German
- Upon request: other languages with interpreters

Target groups

- Management staff on system and institutional level of TVET
- TVET experts
- TVET teaching staff in TVET institutions and companies

Participation requirements

- Basic ICT / computer skills, current Web browser, office applications
- At least 3 years of professional experience
- Fundamental skills in mathematics, physics or electrical engineering

Duration

- 2 seminars (2,5 hrs each)

Equipment

- Notebook / PC (Linux, Mac, Win 10/11)
- Stable (preferred: fast) internet connection
- Integrated or external microphone
- Optional: webcam

Certificate

The participants will receive a certificate of participation after successful completion of the course.

Your contact

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