HYDROGEN VET FORUM

Teachers' Course on Hydrogen in mobility at Spa FIA WEC

Spa- Francorchamps (Belgium), 09 - 11 May 2024

At the Hydrogen VET Forum, you will learn more about hydrogen and its use in mobility, covering topics such as fuels cells and use of H2 in ICE, as well as safety when handling hydrogen tanks and refuelling stations, to name a few. The theoretical training will be complemented by exchanges with experts and drivers from the two racing teams who demonstrate H2 prototypes in competition for a zero emission motor racing. Participants will also have the opportunity to attend demonstration laps to see these teams in action.

Target group: Teachers working on vocational education and training (VET)

The course consists of two parts:

1. During April 2024, online courses which will take 1 to 2 days with the aim to give the participants enough basic knowledge of the hydrogen aspects and applications before the physical event in Spa-Francorchamps (Belgium).

2. A 2-day face to face event in Spa, Belgium from 9 – 11 May 2024

Participation and execution of course:

Both parts are mandatory in order for the teacher/trainer to be able to be issued a digital badge confirming the attendance of the course. To attend the physical training in Spa you need to successfully have concluded the online courses.

Learning outcomes :

- The participant can explain the hydrogen market and the value chain.
- The participant can describe how fuel cells work as well as ICE with hydrogen and know basic hydrogen vocabulary.
- The participant has an understanding of the applications of hydrogen in the automotive sector.
- The participant can identify the safety aspects of working with hydrogen.
- The participant can underline the opportunities, areas of application and developments of hydrogen.
- The participant has gained awareness of educational challenges related to hydrogen through networking with peers.
- The participant can apply English language and multicultural skills in an international setting.

Online course before the event in Spa:

- The participant can explain the hydrogen possibilities and the value chain
- The participant can describe how hydrogen works and know basic hydrogen vocabulary
- The participant has an understanding of the applications of hydrogen
- The participant can identify the safety aspects of working with hydrogen

Workshop, visit and meeting with experts in Spa:

- The participant has an understanding of the applications of H2 in motor racing, laboratory of mobility.
- The participant can underline the opportunities, areas of application and developments in motor racing for a zero emission mobility.
- The participant has gained awareness of educational possibilities challenges in H2 sector through networking with peers and automobile manufacturers.
- The participant can apply English language and multicultural skills in an international setting.

Detailed programmes:

1. Please register and complete the courses for the event before **05 April 2023** : https://forms.office.com/e/fHPT0qNVfC . You need to register first. The ASA organisation can only then enrol you to the course. You will get for each (registration and the enrolment) a confirmation email.

2. **Programme for the online course :** Course: Hydrogen VET Forum (skills-framework.eu)

3. **Programme for the course in Spa-Francorchamps: (see below or** Hydrogen VET Forum - 2024.docx - Google Docs**)**

Costs and registration:

The online course and the event in Spa are **free of charge**, but all participants will pay for their own travel, accommodation and dinners. This can for example be financed by the schools' own Erasmus+ Mobility projects.

Please note that this is a pre-registration. There will be a selection process to attend the event in Spa, while the online course will be accessible to all. That said, certification will be issued only to those that complete the entire course. You will be notified whether you have been selected for attendance shortly after the pre-registration deadline. Please await any bookings of travel and hotel until you have received the confirmation.

About Hydrogen VET forum in Spa

The Hydrogen VET forum in Spa is an initiative launched by the Automobile Club de l'Ouest, the FIA World Endurance Championship, the MissionH24 and its partners Automotive Skills Alliance[1], GreenSkillsforH2[2] and Skills Alliance for Industrial Symbiosis[3], as part of the 2024 FIA World Endurance Championship 6 Hours of Spa-Francorchamps. The Hydrogen VET forum in Spa aims to gather current and future teachers and trainers to share ideas and good practices, work together and deepen their knowledge about the hydrogen ecosystem. The event will collect about 20 teachers and trainers from around Europe. Looking forward seeing you in **Spa**!

ABOUT AUTOMOBILE CLUB DE L OUEST AND FIA WORLD ENDURANCE CHAMPIONSHIP

Since 1923, The Automobile Club de l'Ouest is the organizer of the 24 hours of Le Mans. This race has always been a technological laboratory validating numerous research. Since 2018, the strategy of ACO has been to decarbonize the race and the mobility. H2 allows safety, autonomy, competitiveness and zero emission, only water at the exhaust. An H2 category will be introduced in 24 Hours of le Mans. With MissionH24, ACO has a H2 demonstrator on track and promote H2 potential.

Acknowledgement

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Flamenco

Forward Looking Approaches for Green Mobility Ecosystem Network Collaboration

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[1] https://automotive-skills-alliance.eu/

[2] https://greenskillsforhydrogen.eu/

[3] https://www.aspire2050.eu/sais

PROVISIONAL AGENDA

When	What	Who	Location
March -April : Pre-selection			
March - April	**Participants' selection :** based on online training content		Online
Day 0 : 09 May 2024			
17.00 – 18.00	**Participants' arrival at hotel**	All	Hotel
18.30 – 20.30	Get to known + discussion on challenges and benefits	All	
Day 1 : 10 May 2024			
08.00 – 09.00	Transfer Aachen Hauptbahnhof - Technifutur (Spa-Circuit)	All	Bus
10.00 – 10.15	**Welcome words & introduction** · Introducing H2 VET Forum & cooperation with ACO	Chatzi (HE) Fillon (ACO) Stolfa (ASA)	Technifutur
10.15 - 10.45	**Hydrogen : what and benefits** · Hydrogen benefits · Intro into H2 technologies i.e. fuel cells · Understanding the H2 market in Europe · Intro into production pathways? · Focus on renewable H2 production?	Olaf, Green Skills for H2	Technifutur
10.45 – 12.00	**Hydrogen and education** · General Relevance of Green Skills and Transversal Skills (digital, methodological, social, personal) · Skills for Industrial Symbiosis and Energy Efficiency (affected job profiles, classified skills) · Role of trainers, teachers, middle management for teaching / training	Antonius, TU Dort. University	Technifutur
12.00 - 13.00	**Lunch**	All	Technifutur
13.00 - 13.30	Transfer Technifutur - Paddock	All	Bus
13.30 - 14.00	Module 1: H2 in Mobility (stand MissionH24/ engineer and driver) performance :	B. Aslan, S. Richelmi	
14.00 - 14.30	Module 2 : H2 in Industry (fuel cell Symbio expert)	S. Grisin	

14.30 - 15.00	Module 3 : H2 Safety (tank expert Plastic Omnium)		
15.00 - 15.30	**Break**	All	
15.30 - 16.00	Module 4 : H2 storage H2 (Station TotalEnergies).	T. Fritsch	
16.00 - 16.30	Module 5 : H2 ICE (internal combustion engine) with Alpine expert.	PJ Tardy	
16:30 - 17:00	Module 6 : H2 safety rules, H2	B. Niclot	
17.30 – 19.00	Transfer Spa paddock – Aachen Hauptbahnhof	All	Bus
19.00 – 19.30	Free time		
19.30 – 21.30	Group dinner	All	
Day 2 : 11 May 2024 (optional for each)			
08.00 – 09.00	Transfer Aachen Hauptbahnhof – Spa Paddock	All	Bus
09.00 – 10.00	Training and check of the 2 H2 prototypes with the 2 teams before the demo lap.	All	Mission H24
10.00 – 11.00	Visit of Hydrogen Village and join team responsible for demo lap (Mission H24 tbc)	All	H2 village
11.00 – 12.00	Demo lap of the H2 car	All	Mission H24
12.00 – 13.00	**Lunch**	All	
13.00 – 13.30	Start of race : 6 Hours of Spa-Francorchamps	All	
13.30 – 15.00	Transfer Spa Paddock – Aachen Hauptbahnhof	All	Bus