

Course Title: **HYDROGEN AND SAFETY FOR  
MOBILE APPLICATIONS (HSMA)**

**Hybrid Course | 4 ECTS | September 2025**

Offered by: Politecnico di Torino (POLITO), Graz  
University of Technology (TUG), Universitat  
Politècnica de Catalunya (UPC)

Language: English

Format: Online + In-person project work in Turin

When: September 2025 (Online 1/09 to 04/09 – In  
person 7/09 to 11/09)

### Main Content

The HSMA course trains the next generation of engineers to navigate the energy transition by focusing on hydrogen technologies and safety in mobile applications like cars, buses, trains and in the field of aerospace.

### Students will explore:

- Hydrogen production, storage, and distribution
- Safety standards, risk scenarios, and failure mechanisms
- Real-world case studies and tunnel safety issues
- Material behaviour under hydrogen exposure
- Risk analysis methods and emergency response strategies

### Course Highlights

- ✓ Virtual Lectures from Experts
- ✓ Material Characterization Techniques
- ✓ Case Studies: Real Incidents & Fire Tests
- ✓ Multidisciplinary Teamwork
- ✓ Hands-on Group Project (Turin, Italy)
- ✓ Peer Review and Presentations

### Why Join?

- Tackle real-world engineering challenges
- Collaborate with peers from across Europe
- Gain practical and theoretical skills on cutting-edge hydrogen applications
- Learn from researchers in energy, materials, and transport safety

### Application & Contact

There are **limited spots available** for each university in the Unite! Alliance.

To apply or inquire, **contact your local coordinator** or reach out directly:

✉ **Davide Papurello** (PoliTo:

[davide.papurello@polito.it](mailto:davide.papurello@polito.it))

✉ **Daniel Fruhwirt** (TUG: [fruhwirt@ivt.tugraz.at](mailto:fruhwirt@ivt.tugraz.at))

✉ **Jose Ignacio Rojas Gregorio** (UPC:

[josep.ignasi.rojas@upc.edu](mailto:josep.ignasi.rojas@upc.edu))

*Join the hydrogen revolution. Design safe, sustainable systems for tomorrow's mobility*

