

Industrial Sustainability

This course equips industrial professionals with tools to drive sustainability and energy transition. It covers resource optimisation, decarbonisation strategies, and economic investment for measurable impact.

Participants gain systems thinking, techno-economic-environmental-feasibility assessment skills, and digital tools to unlock decarbonisation opportunities and ESG reporting, earning a University of the Witwatersrand certificate.



Wits Plus



wits_plus



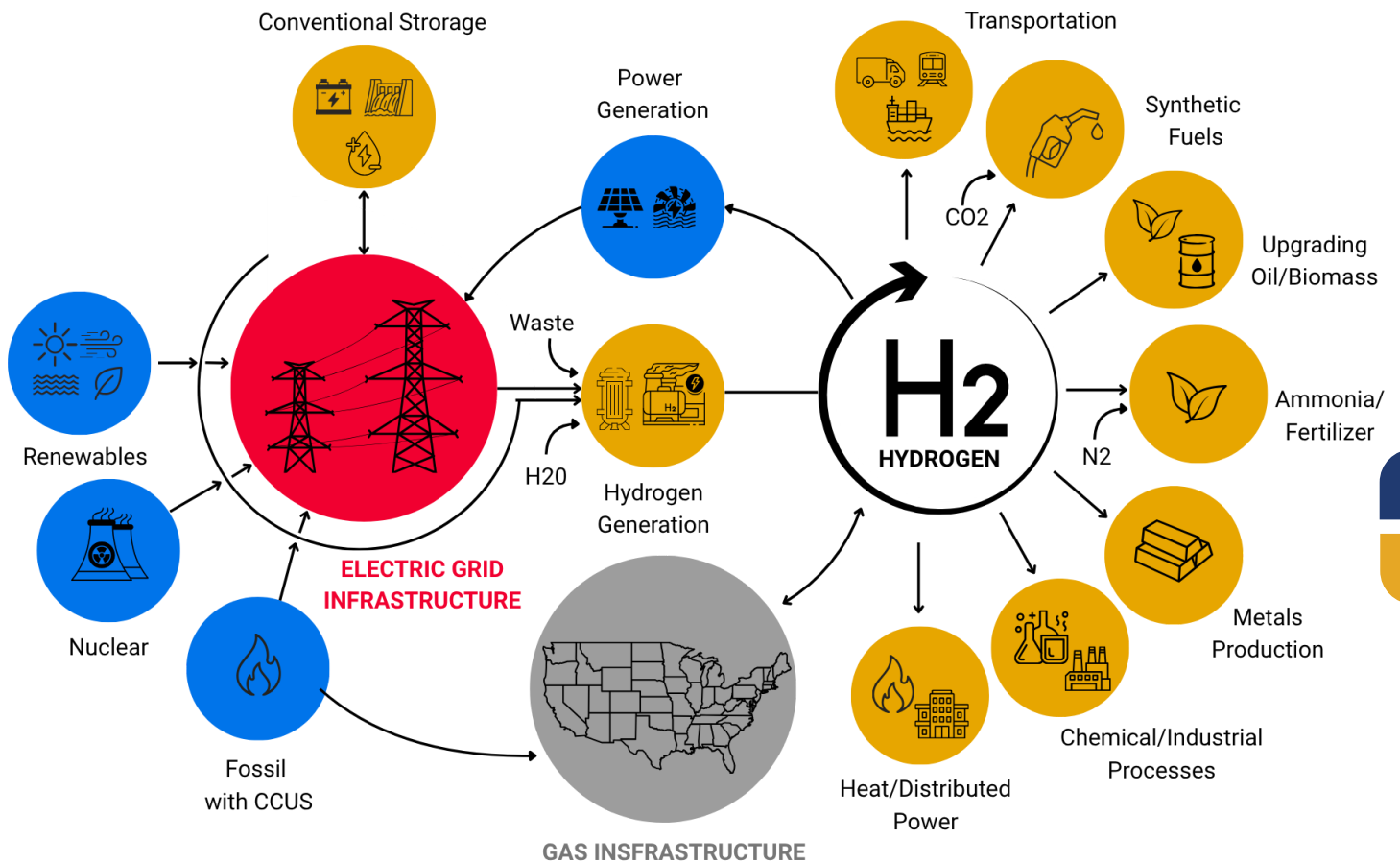
Wits Plus



ewitsplus



Start your learning
journey today!
www.witsplus.ac.za



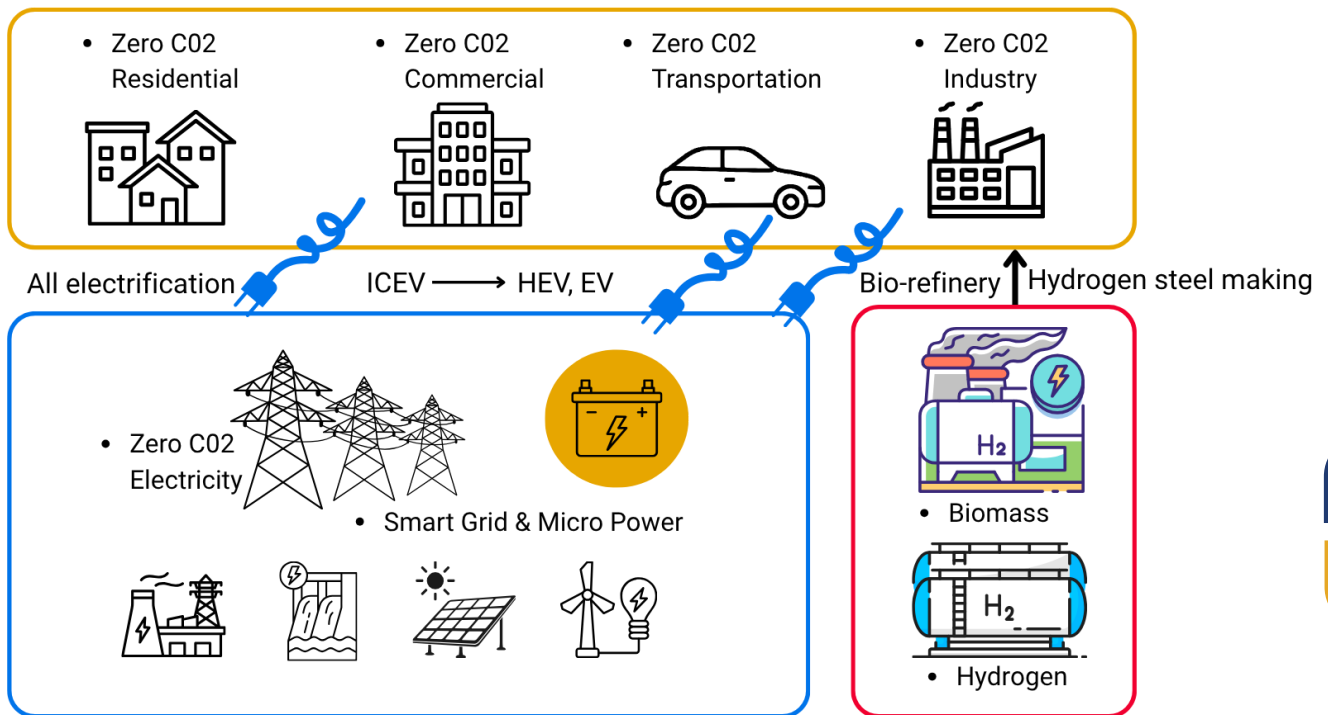
Course Aim

This course aims to equip industrial professionals to understand key sustainability frameworks and apply practical, industry-relevant solutions to improve resource efficiency, reduce energy and water use, lower emissions, and support low-carbon transitions. It develops the ability to assess technical and economic feasibility, identify improvement opportunities across systems, and make informed decisions that advance sustainable industrial performance. The course also promotes systems thinking, cross-disciplinary collaboration, and a culture of sustainability that enables participants to contribute meaningfully to their organisations and to society.

Learning Outcomes

By the end of the course, the student should be able to:

- Explain core sustainability frameworks relevant to industrial systems.
- Apply systems thinking to analyse resource use and process efficiency.
- Identify opportunities to reduce energy use, water consumption, and emissions.
- Select low-carbon technologies and energy transition pathways. Use key indicators and data-driven tools to support sustainable decision-making.
- Contribute to organisational sustainability.



Course Content

The course content addresses the following topics:

- Foundations of sustainability and global frameworks
- Energy fundamentals, efficiency improvement, and system optimisation
- Water-energy-emission nexus and hydrogen and circular economy
- Low-carbon energy transition and power generation futures
- ESG reporting, green energy finance, and regulatory compliance
- Digital transformation for sustainable industrial operations

Course Requirements

- Diploma (NQF 6) or equivalent OR
- 3+ years' work experience

General Information

Duration: 5 Days (Daily classes 8:00- 16:00, with a group presentation on Day 5)

Delivery: Classroom

Certification: Certificate of Competence

This short course is certified and Quality Assured by the University of the Witwatersrand in accordance with its statutory mandate. It does not automatically lead to a qualification registered on the National Qualifications Framework (NQF).