

Battery testing

With the booming development and use of battery-powered applications, there is a growing need for specialised battery professionals. Apart from understanding the main components of a battery and its function, it is important to look at how battery cells and systems can be tested to ensure they comply with required specifications.

The Battery testing course introduces you to the purpose of battery testing. Specifically, you will be introduced to different methods of battery testing that allow battery cells and systems to be evaluated properly after manufacturing. You will discuss the importance of testing, and explore the related standards, required testing infrastructure, safety measure, and analysis tools. Finally, you will explore how to create and incorporate battery models in different applications in order to assess the performance of the battery during use.

Learning outcomes

This course empowers learners to:

- Explain the need for battery testing.
- Select the correct test for a given battery application to select the right technology.
- Look for specific standards and regulations.
- Understand and explain safety precautions in battery testing labs.
- Retrieve and interpret basic analysis results.
- Link battery test results to battery modelling activities.

Course structure and content

Battery testing is an online course and can be taken at the learners' usual study location. The course consists of three modules. Each module includes reading materials and animations to illustrate the content.

- **Module 1:** Understanding the basics of battery testing.
- **Module 2:** Exploring the setting-up and execution of battery testing programmes.
- **Module 3:** Understanding how to work with battery testing results.

Who are the experts?

Dr. Jeroen Büscher

Product Manager Electrical Storage of Vito / Energy Ville. Since 2016 Jeroen is leading the VITO team working on electrical storage technologies and is responsible for the development and execution of the related activity roadmap. Since 2011, Jeroen has been coordinating several projects within Europe on electrical storage, smart grids, and e-mobility.

Target audience

This course is beneficial for battery system integrators, battery technicians, Energy Management System developers and providers, and researchers in the field of energy willing to develop or build further on battery testing. But anyone interested in understanding battery testing might find it useful. In order to be able to follow and benefit from the Battery testing course learners would need to have a basic understanding of

battery cells, system components and their working principles. Also, a basic understanding of electrical systems.

Course evaluation

To succeed in the Battery testing course and receive a Certificate of Completion, a learner needs to complete at least 80% of the course contents.

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