

IEEE eLearning Library

Transportation Electrification Course Series Package

via the IEEE Xplore® Digital Library

Transportation Electrification Course Series

Understand concepts related to

- electric motors,
- fuel cells,
- electric drive trains, and
- electric vehicle batteries, with a focus on lithium-ion batteries.

Ideal for technical professionals at organizations in the automotive industry as well as academic students in engineering programs, especially those interested in pursuing careers involving automotive and battery technology.

To view all Transportation Electrification courses included, visit:
<http://bit.ly/1g4dqaj>

IEEE eLearning Library Course Series Packages

IEEE eLearning Library course series packages provide comprehensive sets of educational modules on trending topics as well as collections supporting specific development needs. Gain access to the courses needed to get up to speed or refresh your knowledge in key topics areas, gain new insight into emerging technologies, and develop skills needed to develop professionally and stay competitive in today's marketplace.



Transportation Courses Quick Facts

Develop the skills and knowledge needed to succeed:

24 courses that focus on various transportation technologies

Delivered via IEEE Xplore, with its mobile-friendly design and powerful search features

Printable individual CEU or PDH certificates upon the successful completion of a course

Professionally developed multimedia courses

Introductory, Intermediate, or Advanced course levels

Perpetual access options are available

Other course series packages available:

- Cloud Computing
- Fundamentals for Technical Professionals
- Professional Engineer License

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Courses included in this package:

Battery Cluster

Introduction to Batteries
Battery Design Principles
Lithium-ion Batteries
Modeling Lithium-ion Batteries
Next Generation Batteries

Electric Drive Trains

Transportation Electrification: Applications of Electric Drive Trains
Transportation Electrification: Introduction to Power Electronics in Electric Drive Trains
Transportation Electrification: Power Semiconductors Used in Electric Drive Trains
Transportation Electrification: Electric Machines in Electric Drive Trains

Wireless Power Transfer

Introduction to wireless power transfer
Methods of study of WPT systems
Coil design and analysis
Power electronics topologies for WPT
Other issues of WPT

Fuel Cells

Fuel cell principals
Fuel cell power characteristics, efficiency and life span
Fuel cell system components
Fuel cell applications
Introduction to hydrogen economy and fuel cell economic aspects

Electric Motors

Introduction to Electric Machines
DC Motors

AC Motors: Induction Motors

Permanent Magnet Motors
Switched Reluctance Motors: Types, Design and Control

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IEEE Continuing Education Units (CEUs) and Professional Development Hours (PDHs)

All courses are peer-reviewed by content experts, a process that guarantees both the quality of the technical content as well as adherence to strict IEEE criteria for educational excellence. As a CEU provider, IEEE can offer CEUs for any IEEE learning activity running at least one hour in duration. IEEE CEUs can also be converted into the PDHs needed to meet recertification requirements for professional certifications or licenses.

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