



ELECTRIC VEHICLE BATTERY PACKAGING AND ASSEMBLY

Certification

Electric Vehicle (EV) battery demand surges, driving rapid manufacturing expansion and over 150,000 new jobs by 2030*

To help meet the growing demand for EVs and battery-operated devices, SME is introducing its second Electrification Certification, Electric Vehicle Battery Packaging and Assembly, to increase talent in the EV battery-related industry. This credential is designed for entry-level positions in the areas of battery assembly and packaging for electric vehicles. The EV Battery Packaging and Assembly Certification will also provide the necessary skills for individuals with no background in battery packaging and assembly or for individuals who have experience in this area but need to tailor their knowledge to the EV market. The credential is ideal for high school and college students, dislocated workers, under-employed individuals, veterans, at-risk youth, and others who are seeking new employment in a new, fast-growing industry.

NEED HELP PREPARING?

The online classes from Tooling U-SME cover topics agreed upon by manufacturing experts as being relevant for foundational EV lithium-ion battery knowledge across a wide-range of industries. The information is presented in an engaging and interactive format for maximum effectiveness, and pre-and post tests measure a student's increased knowledge. Classes are self-paced, typically taking 60 minutes to complete, and can be completed in just a few weeks (typically less than one month). They are conveniently accessible anytime, anywhere on desktops and laptops, and on tablets and phones with the Tooling U-SME app.

* Department of Energy

BUILD A COMPREHENSIVE FOUNDATION OF KNOWLEDGE

This program focuses on the fundamentals of electric vehicle lithium-ion battery packaging and assembly skills and competencies that are required as a starting point for any career pathway a candidate may pursue in the field of EV Battery packaging and assembly:

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| Advanced Battery Components | Battery Management System Design & Analytics |
| EV Battery Types, Comparisons, & Uses | Temperature Monitoring |
| Evolution & Future of Battery Technology | Automated Measurement of Pack Isolation |
| EV Battery Manufacturing 101 | Battery Recycling & Disposal |
| EV Battery Limitations & Stress Factors | Introduction to Battery Cell Inspection |
| Factor Tuning Battery Failure Mechanisms | |
| Types of EV Battery & Pack Design | |

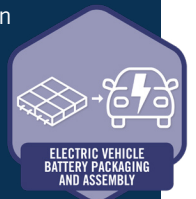
EARN A NATIONALLY RECOGNIZED CERTIFICATION

The SME Electric Vehicle Battery Assembly and Packaging (EVBPA) is focused on fundamentals of electric vehicles lithium-ion battery packaging and assembly skills. The credential can help individuals begin a lifelong career in a growing industry where there is opportunity for advancement and good-paying jobs.

sme.org/EVBPA

GAIN VISIBILITY WITH A DIGITAL BADGE

Upon passing the certification exam, individuals will earn a digital badge, providing enhanced opportunities to share their qualifications and get discovered by employers.





ELECTRIC VEHICLE BATTERY PACKAGING AND ASSEMBLY EXAM PREPARATION CLASSES

Overview of Electric Vehicle Components

Introduction to Electric Vehicle Charging

High Energy Batteries

Introduction to Battery Design & Assembly

Lithium-Ion Battery Handling and Safety

Battery Management Systems Overview

Battery Recycling

Lockout/Tagout Procedures

Arc Flash Safety

High Voltage Safety

Department of Transportation Hazard Communication Overview

Hazardous Materials Handling

Fire Safety and Prevention

Flammable/Combustible Liquids

Electrical Units

Safety for Electrical Work

Introduction to Circuits

Electrical Print Reading

DC Power Sources

Introduction to Semiconductors

Battery Selection

Troubleshooting: Electrical Faults

Troubleshooting: Continuity Testing

Relays, Contactors, and Motor Starters

Control Devices

Introduction to Electric Motors

DC Motor Applications

Intro to Adhesive Bonding

Basics of the Bonding Process

Condition Monitoring