

EVSE Technician Curriculum Implementation Guide

Overview

This curriculum prepares students for careers in the electric vehicle supply equipment (EVSE) industry through a 160 hour, 4- 16 week intensive program. It combines classroom instruction, lab activities, and industry-aligned certifications.

Curriculum Components

Core Training Modules

- Module 1: Electrical Principles and Safety
- Module 2: Understanding Power Supply
- Module 3: Roles, Repair Orders, and Communication Standards
- Module 4: Field Practices and Documentation

Supporting Documents

- EVSE Technician Course Outcomes by Module – Full syllabus with weekly breakdowns, learning outcomes, and quizzes.
- Intro to the New Energy Workforce – Contextual overview of clean energy careers and Louisiana’s workforce transition.
- EVSE Broadband-Software Lecture – Supplemental technical content that covers network connectivity, diagnostics, and software troubleshooting.
- GW Ch11 Presentation – Supplemental technical content on charging levels, hydrogen refueling, and smart infrastructure.

Getting Started

1. Faculty/Instructor Preparation

- Instructors should have knowledge and experience in electrical systems, automotive technology, or clean energy.
- Recommended certifications: OSHA 10, NFPA 70E, and familiarity with SAE and NEC standards.
- Reach out to existing faculty first to identify an appropriate instructor then to industry partners and experts
- Instructors can opt to be trained at Baton Rouge Community College (BRCC). Contact the Training and Workforce Development Manager for Clean Energy

2. Partnerships

Building strong relationships with industry leaders is essential for enriching the EVSE Technician Curriculum. Colleges are encouraged to engage with local and national employers to provide students with real-world exposure through internships and guest speaker sessions.

Possible Partners:

- **Local businesses and industry leaders** can provide guest lectures, support internship/apprenticeship needs, provide classroom diagrams/resources, donate equipment, and in some cases financial support
- **City organizations** and chambers of commerce can connect you with local businesses and potential students.
- **The state workforce commission** can help you decide if a registered apprenticeship is right for your program
- **High schools and local workforce programs** can become a significant feeder for students into your program
- **Other departments at your college** may already have programs that overlap with the course material and be able to provide you valuable resources. This is especially useful to provide students opportunities to continue their education at your institution
- Connecting with **larger, local universities** opens the opportunity to create multiple pathways to offer your students more options to continue education in different but related fields

Here are some recommended steps and benefits:

- Identify key, local stakeholders in the EVSE industry, including utilities, manufacturers, and service providers, local economic development organizations, chambers of commerce, and workforce organizations, high schools, and other universities.
- Reach out via email or phone to introduce your program. If possible, setup a separate meeting time find out their needs/concerns in reference to their workforce and hiring needs
- Highlight mutual benefits such as workforce development, brand visibility, and community engagement.
- Explore varied partnership opportunities through financial support, internships, guest speakers, career fairs, lab demonstrations, facility tours, etc.
- Invite professionals to speak during relevant modules or career panels.
- Prepare to offer students internship placements or job shadowing experiences with partner organizations.
- Document and share success stories to encourage ongoing collaboration.

3. Creating Educational Pathways and University Partnerships

To support long-term student success, colleges implementing the EVSE Technician Curriculum are encouraged to establish clear pathways for continued education. These pathways can include both internal advancement opportunities and external partnerships with four-year institutions. These partnerships and pathways ensure that students can grow beyond entry-level roles and become leaders in the evolving clean energy workforce.

Strategies for Building Educational Pathways:

- Develop agreements that allow students to transfer credits toward associate or bachelor's degrees.
- Offer stackable credentials that build on the EVSE certification (e.g., electrical, energy systems, or engineering technology).
- Create bridge programs that help students transition from technical training to academic degrees.
- Provide academic advising and career counseling focused on clean energy and technology sectors.

Partnering with Universities:

- Collaborate with universities to offer continuing education or degree completion programs.
- Invite university faculty to guest lecture or co-develop advanced modules.
- Explore dual-enrollment or 2+2 programs that align technical training with bachelor's degree requirements.

Related Fields for Continued Study:

Academic:

- Electrical Engineering
- Renewable Energy Technology
- Mechanical Engineering
- Mechatronics
- Computer Science
- Cybersecurity (Energy Systems Focus)
- Energy Systems Management
- Sustainable Infrastructure
- Industrial Technology
- Clean Energy Policy and Planning

Technical:

- Electrical Installation and Maintenance
- Automotive Technology
- Power Systems Technology
- Smart Grid and Metering Systems
- Industrial Automation and Controls
- HVAC with Electrification Focus

- Solar Photovoltaic Installation
- Battery Storage Systems
- Electric Powertrain Maintenance
- Telecommunications Infrastructure
- Broadband and Network Cabling
- Utility Line Technician Training
- Instrumentation and Control Systems

4. Marketing the EVSE Technician Course

Effectively promoting the EVSE Technician Curriculum is essential to attracting a diverse and motivated student body. Marketing efforts should highlight the program's relevance, educational pathways, diverse career potential, and alignment with the growing clean energy sector.

Key Messaging Themes

- **High-Demand Careers:** Emphasize the rapid growth of the EV industry and the need for skilled technicians. Use local, workforce data to support this.
- **Short-Term Training, Long-Term Impact:** Promote the course length as a fast track to employment.
- **Hands-On Learning:** Showcase the program's lab-based, real-world training approach.
- **Pathways to Advancement:** Highlight opportunities for continued education and career growth.
- **Clean Energy Future:** Appeal to students interested in sustainability, technology, and innovation.

Marketing Channels

- **Website & Social Media:** Create a dedicated program page with videos, testimonials, and enrollment info. Use platforms like Instagram, LinkedIn, and Facebook to reach different audiences.
- **High School Outreach:** Offer presentations at local high schools and career centers to introduce and educate prospective juniors and seniors about the program
- **Community Events:** Attend job fairs, clean energy expos, and local festivals to promote the program.
- **Email Campaigns:** Send targeted emails to prospective students, alumni, and workforce development contacts.
- **Local Media:** Share press releases and success stories with newspapers, radio stations, and local TV.
- **Workforce Boards & Nonprofits:** Collaborate with workforce organizations that serve underrepresented or unemployed populations.

Promotional Materials

- Flyers and brochures
- Student and employer testimonials

- Program overview videos
- Infographics showing career pathways and salary potential
- QR codes linking to application or interest forms

Course Details

Pre-Course Requirements

Students must complete OSHA 10 and NFPA 70E (CPR and First Aid training is also suggested, depending on your students' levels) training before beginning the course. This may be able to be tied into a course offered on your campus already. Find out the best way to incorporate into your program.

Course Schedule

The original course structure includes morning lectures, afternoon labs or guest speakers, weekly quizzes, and a final exam. This content can be adapted to last anywhere from 4 -16 weeks depending on instructor availability, lab availability, type of student targeted, and college guidelines. Possible schedules below.

Possible Course Timelines					
Course Length (Weeks)	Hours/ Day	Days/ week	Hours/ Week	Total Hours	Comments
4	8	5	40	160	<u>1 month</u> Shortest Course Timeline Available Probably best for High School Students/ Unemployed Adults
7	5	5	25	175	<u>A little less than 2 months</u> The full 7 weeks would give 3 extra days to play around with within the total timeline of the course
8	4	5	20	160	<u>2 months/Half Semester</u> Probably best compromise between length of course and hours/day Manageable for professionals who have FT jobs
8	5	4	20	160	<u>2 months/Half Semester</u> Probably best compromise between length of course and hours/day Manageable for professionals who have FT jobs
16	2	5	10	160	<u>4 months/Full Semester</u> Best to line up with partnering universities Probably best option for professionals

Week-by-Week Breakdown

Week	Module	Focus Areas
1	Module 1	Electrical safety, Ohm's Law, AC/DC, tools
2	Module 2	Power supply, charging levels, grounding
3	Module 3	Communication protocols, repair orders
4	Module 4	Field professionalism, documentation, ethics

Labs & Activities

- Voltage and continuity testing
- Grounding and bonding exercises
- Communication protocol simulations
- Repair order documentation
- Role-playing customer interactions

Tools & Technology (Full Supply List Available Separately)

- Digital multimeters, clamp meters, megohmmeters
- EVSE test stations (Level 1, 2, and DCFC)
- Broadband diagnostic tools (ping, signal meters)
- Software dashboards for charger diagnostics
- CRM and documentation platforms (optional)

Assessment

- Weekly quizzes (included in each module)
- Final exam (comprehensive)
- Lab performance and professionalism
- Optional: SAE EVSE Technician Certification

SAE EVSE Technician Certification Exam, developed by SAE International, is a nationally recognized credential that validates a technician's knowledge and skills in electric vehicle supply equipment (EVSE) installation, maintenance, and safety. The exam covers key areas such as electrical principles, charging station types and levels, communication protocols (e.g., OCPP, ISO 15118), grounding and bonding, and diagnostic procedures. It is typically administered online or at approved testing centers and is recommended for individuals who have completed a structured EVSE training program. Earning this certification enhances employability and demonstrates readiness to work in the rapidly growing EV infrastructure sector.

Guest Lectures/Related Activities

- Invite guest speakers from utilities, manufacturers, and clean energy employers.
- Incorporate guest speakers from related disciplines to expose students to additional career options
- Incorporate Career Services for help with resume writing, interviewing skills, and professionalism. Introduce students to available tools at your institution.
- Invite Business Owners or your institution's business department to discuss turning well-developed skills into business-owning opportunities
- Invite the Marketing department to explain the importance of building a brand, finding a niche, and maintaining visibility all play a part in having a successful business
- Incorporate a guest lectures from all pathways available at your institution to reinforce all opportunities available to continue their education at your institution with other trades or to further their education through associates or bachelor's degrees
- Coordinate site visits or internships with local EVSE installers or fleet operators.

Optional Enhancements

- Integrate GW Ch11 Presentation into Module 2 or 3 for deeper technical context.
- Use Intro to the New Energy Workforce for orientation or career exploration.
- Include Broadband-Software Lecture in Week 3 or 4 for advanced troubleshooting.
- Provide all students with internship opportunities with partners
- Incorporate the cost of the SAE test into the course to promote certification as soon as the course is over