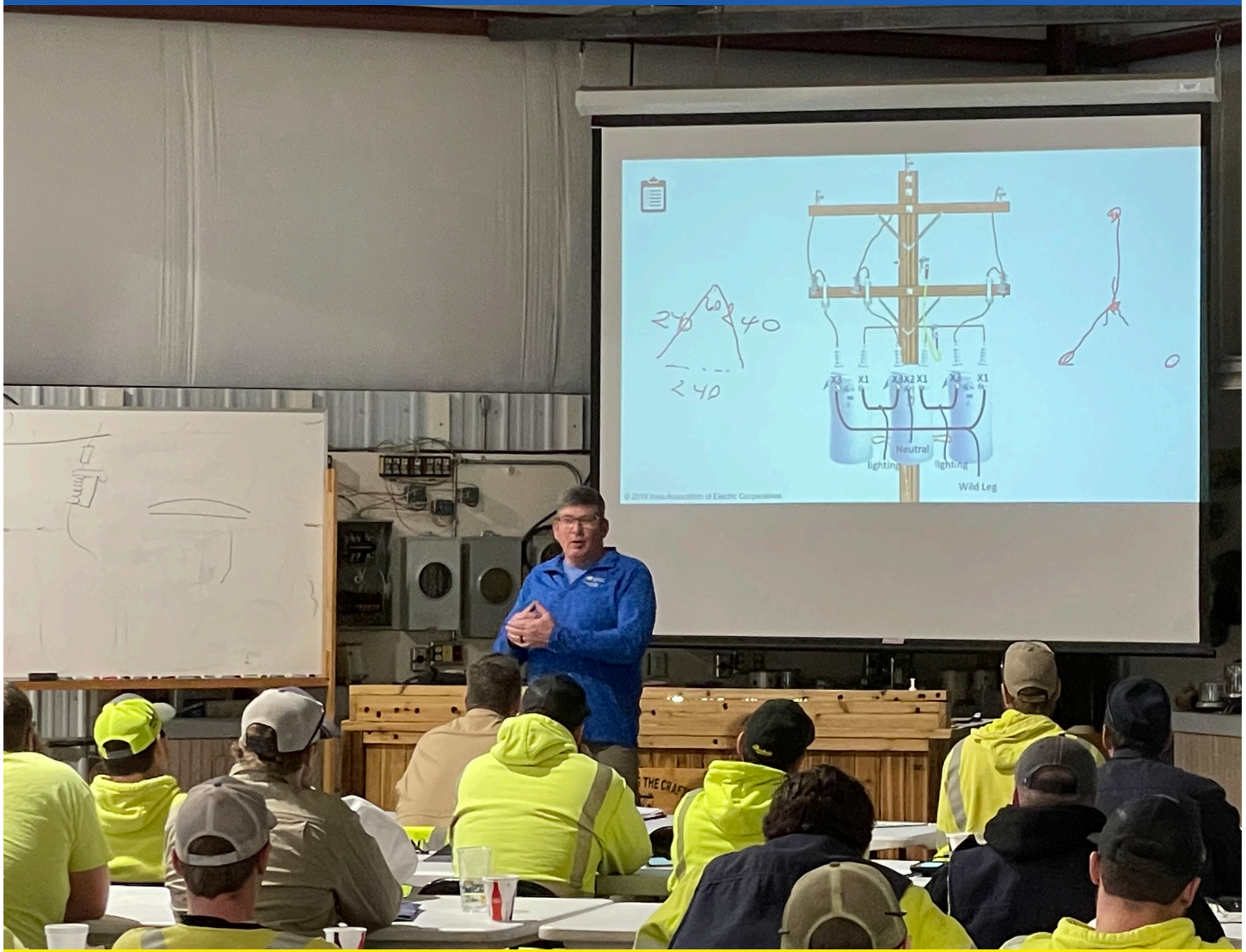


# Transformer School and Pre-conference Workshop

**December 15–18, 2025**



**MMUA Training Center  
1004 Michigan Rd, Marshall, MN**

# Program details

## Pre-conference workshop: Basic single-phase transformer connections and theory

The pre-conference course is designed to provide an introductory or refresher overview of the fundamentals, covering topics such as safe work practices, transformer theory, basic calculations, connections, and sizing. Please note separate registration is required.

## Transformer program: Three-phase transformer connections

The three-phase course will start with the basics of transformers, including turns ratios, polarities, calculations, connections, and troubleshooting. Participants will learn about the basic three-phase systems and the relationship of the phasor to the transformer itself. In the hands-on portion of the course, participants will work with miniature transformers that are energized and will blow fuses, thereby experiencing what happens when something is wired incorrectly. The class will further develop the miniature transformer banks and focus on troubleshooting techniques. Additionally, motor rotation as it relates to three-phase systems will be discussed, along with methods to prevent voltage surges when switching a three-phase bank. After completing the three-phase transformer connections course, participants will have a broader understanding of the following transformer-related topics:

- Basic three-phase connection
- Delta connection
- Wye connection
- Open delta connection
- Three-phase troubleshooting

## Pre-conference Workshop Agenda

### Monday, December 15

- 12:00–1:00 Registration
- 1:00–4:00 Basic single-phase connections

### Tuesday, December 16

- 8:30–12:00 Basic single-phase connections
- 12:00–1:00 Lunch

## Transformer School Agenda

### Tuesday, December 16

- 12:00–1:00 Registration
- 1:00–4:00 Three-phase transformer connections

### Wednesday, December 17

- 8:30–12:00 Three-phase transformer connections
- 12:00–1:00 Lunch
- 1:00–4:00 Three-phase transformer connections

### Thursday, December 18

- 8:30–12:00 Three-phase transformer connections

## What to bring

Please bring appropriate attire and materials, including:

- Fire resistant clothing
- Safety footwear
- Safety glasses
- Volt/amp meter
- Rubber gloves

## Registration information

### Pre-conference workshop

- Member: \$150 per person
- Non-member: \$285 per person

### Transformer school

- Member: \$760 per person
- Non-member: \$950 per person

Registration fee includes school tuition, materials, and refreshment breaks. MMUA will issue a refund (less \$50 processing fee per person) provided MMUA is notified of the cancellation by 4:30 pm on December 1. Visit [mmua.org/events](http://mmua.org/events) to register. **Register by November 21 for best rate.** Registration fees increase \$50 after that date. Advanced registration ends December 1, 2025.

## Hotel information

Marshall offers many hotel options, in addition to the hotels listed below. MMUA has arranged for discounted lodging at these hotels. Please call the hotel directly and ask for MMUA's reduced rate when making your reservation. We recommend making your reservation as soon as possible, as availability cannot be guaranteed.

### AmericInn

- 1406 E Lyon St
- Marshall
- Phone: 507-537-9424

### Everspring Inn & Suites

- 1500 E College Dr
- Marshall
- Phone: 507-532-3221