

IN THE SHOP

LOG FURNITURE BUILDING

January 5 & 6, 9:00 AM - 4:00 PM

Brockmann Center, Room 109

This two-day workshop will allow participants to learn the techniques involved in log furniture building. Students will be able to identify a round mortise and tenon joint layout and will learn about the techniques in building a log bed, couch and chair along with other types of log furnishings. During this class, a log chair will be built. All building materials will be provided but participants must provide their own personal and protective equipment (safety glasses, gloves, etc.). If participants have draw knives, please bring to class, but they are not required. Instructor is Danny Boyer, Instructor of Carpentry Technology, MSU-Northern. Registration fee is \$135, which includes supplies and two lunches; after December 29 the fee is \$150. Renewal units are available. **Class is limited to 10 participants.**

BEGINNING AUTOMOTIVE/DIESEL ELECTRICAL DIAGNOSIS REPAIR

January 5, 9:00 AM - 4:00 PM

Applied Technology Center, Room 111

Various electrical systems and topics will be covered including Ohm's Law, troubleshooting techniques, Digital Volt/Ohm Meter usage, battery testing, starting/charging system testing, wiring repairs, lighting systems, relays, and general electrical systems utilized in automotive and diesel equipment. The first portion of the class will utilize electrical simulators and the second portion of the class will utilize the participants' vehicles to test and troubleshoot battery, starting, charging, and other various electrical systems. No prior experience is required to attend this workshop. Participants must provide their own safety glasses when working on vehicles in the shop. Industry testing and repair procedures and guidelines will be followed, as will correct safety procedures. Instructor is Wane Boysun, Associate Professor of Automotive/Diesel/Ag-Mechanics, MSU-Northern. Registration fee is \$60, which includes one lunch; after December 29 the fee is \$75. Renewal units are available. **Class is limited to 10 participants.**

BASIC RESIDENTIAL ELECTRICAL WIRING

January 6 & 7, 8:30 AM - 5:00 PM

Brockmann Center, Room 106

During this two-day workshop, you will learn electrical fundamentals and how electricity works in the home. Participants will hook up single pole and three-way switches to light fixtures and install duplex receptacle and Ground Fault outlets. An introduction and use of Volt Ohm Meters and receptacle testers will also be demonstrated and practiced. Participants are requested to bring hand-tools such as screwdrivers (i.e. standard and phillips), wire strippers, hammers, needle nose pliers, safety glasses, and Volt Ohm Meters, if you have them. Instructor is Trygve 'Spike' Magelssen, Associate Professor of Electrical Technology, MSU-Northern. Registration fee is \$120, which includes two lunches; after December 29 the fee is \$135. One semester credit is available for an additional \$130. Renewal units are available. **Class is limited to 20 participants.**

ADVANCED AUTOMOTIVE/DIESEL ELECTRICAL DIAGNOSIS AND REPAIR

January 6, 9:00 AM - 4:00 PM

Applied Technology Center, Room 111

This course will be a continuation of the Beginning Automotive/Diesel Electrical Diagnosis and Repair workshop. Additional topics will include strategy-based diagnosis, electronic sensor operation, and electronic engine controls. Participants will be allowed to work on their own vehicles and learn how to hook up diagnostic scan tools utilized for troubleshooting vehicles. In addition, participants can continue working on projects from the Beginning Automotive/Diesel Electrical Diagnosis and Repair workshop. The workshop will be evenly split between classroom theory and hands-on

troubleshooting. Participants attending this workshop should have fundamental understanding of electrical systems, or have attended the Beginning Automotive/Diesel Electrical Diagnosis and Repair workshop. Participants must provide their own safety glasses when working on vehicles in the shop, and are encouraged to bring basic hand tools such as wrenches, screwdrivers and sockets. Industry testing and repair procedures and guidelines will be followed, as will correct safety procedures. Instructor is Wane Boysun, Associate Professor of Automotive/Diesel/Ag-Mechanics, MSU-Northern. Registration fee is \$60, which includes one lunch; after December 29 the fee is \$75. Renewal units are available. **Class is limited to 10 participants.**

TRUCK OPERATOR PRE-TRIP AND POST-TRIP SAFETY INSPECTIONS

January 7, 9:00 AM - 12:00 PM

Applied Technology Center, Room 112

This workshop will cover pre-trip and post-trip safety inspections for operators of HD trucks and trailers with air brake systems and hydraulic brake systems. Department of Transportation standards will be emphasized. Class will be both in-class and in-lab (live trucks) format. Instructor is Steven Don, Auto/Diesel/Ag Mechanics Instructor, MSU-Northern. Registration fee is \$20; after December 29 the fee is \$25. **Class is limited to 20 participants.**

HEAVY DUTY AIR BRAKE SYSTEMS

January 8, 9:00 AM - 4:00 PM

Applied Technology Center, Room 112

This workshop will cover system and system components of air brake systems used in on-highway and farm truck and trailer applications. Workshop will be conducted both in the classroom and the lab with a live vehicle. Industry training materials will be used throughout the workshop. Newer ABS systems will also be addressed. Operator pre-trip and post-trip safety inspections will be stressed. Instructor is Steven Don, Auto/Diesel/Ag Mechanics Instructor, MSU-Northern. Registration fee is \$50, which includes one lunch; after December 29 the fee is \$65. Renewal units are available. **Class is limited to 20 participants.**