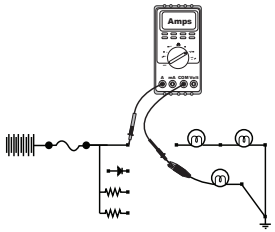




Presents...

# Enhanced DVOM Diagnostic Strategies

## Join us for a Two-Evening Technical Course



***This is NOT a seminar!***

***This is a 2-evening Technical Course***, delivered by some of the best Instructors in the industry, from an Award-winning company which has been Accredited by ASE and ATMC under the CASE Program (Continuing Automotive Service Education) for over 18 years!  
**Courses instructed by East Training**

Problems encountered when diagnosing electrical failures can be compounded by a misunderstanding of system and component operation, which tests to perform, and/or inaccurate analysis of test results. Most times this leads to a significant financial loss. It has been determined that many technicians do not fully understand how to read a DVOM which can lead to misinterpretation of test results. Many do not know how to utilize the optional capabilities of a quality DVOM. Capabilities which will lead to a more profitable diagnosis. This is a hands-on class, each student is asked to bring their own DVOM/DMM, or test equipment with DVOM capabilities.

***NJGCA is proud to partner with East Training and will be conducting more classes in the future!***

*What will be covered...*

**This is a hands-on class. Bring Your DVOM/DMM!!**

**Electricity & Electronics**- Simple, series, parallel and series-parallel circuits, "Real world" application of Ohm's and Kirchhoff's laws, Induction and inductive reactance, DC Voltage signals, AC Sinusoidal and non-sinusoidal signals, Conductors and insulators, Current flow- Conventional Vs. Electron theory. **Semi-conductors**- diode and transistor construction, function, identification, application and out-of-circuit testing with a meter. NPN & PNP transistors, small signal, rectifier, clamping, and avalanche diodes are discussed.

**Digital Meters**- Meter construction and function, manual and auto ranging meter scaling and interpretation, High impedance digital meters- why they are needed, and does yours qualify? **Circuit damage caused by using the wrong meter**. Meter accuracy, measuring EMF, intensity of current, electrical resistance, static Vs. dynamic resistance, diode test function, true RMS vs. average responding meters, Zero-delta-relative modes, trigger, measuring frequency, pulse width, and duty cycle, meter maintenance.

**Advanced meter features**- How and when to use-Min-Max-average-Recording, Touch-hold function. Power up options- Disable auto off, High accuracy 1 ms response, Low ohms etc.

***An excellent means of preparing for any ASE Electrical Certification Tests- Auto, HD Truck, School Bus, Transit Bus or A9 Diesel.***



*A Light Dinner will be served  
at 5:30 PM*

### **Northern Location:**

**June 5 & 6, 2019 - Wednesday & Thursday - 6 to 10 PM**  
**Westview Service - 87 Railroad Ave. - Ridgefield Park 07660**

### **Central/Southern Location:**

**June 12 & 13, 2019 - Wednesday & Thursday - 6 to 10 PM**  
**Lacey Auto Care - 930 Lacey Rd. - Forked River 08731**

**Course Prices:**

**NJGCA Members: \$199**

**Non-Members: \$269**

**ENROLL TODAY!**

**Visit our website: [www.njgca.org](http://www.njgca.org)**

**Register early, limited seating available!**

**If you have any questions please contact:**  
**Debbie Hill 732-256-9646 or [debbie@njgca.org](mailto:debbie@njgca.org)**

A little more about what will be covered...

**Classroom exercises**

Voltage drop, amperage, and resistance testing- on electrical simulator boards. Semi-conductor testing, Voltage and frequency measurements- on sensor simulators, **and more!!**

**Shop exercises**

Testing O<sub>2</sub> sensors and other computer input and output devices. Quickly measure amperage draw of all on-board computer controlled actuators (solenoids, relays etc.), Voltage drop testing of battery, starter, and alternator circuits; OCV testing, component amperage draw testing. Testing for alternator AC ripple and coolant electrolysis, **and more!!**

The objectives stated for this course are:

Upon completion of this course the student...

*will be able to use his DVOM to successfully diagnose circuit and component failures.*

*will be able to explain the practical application of Ohm's and Kirchhoff's laws*

*will be able to identify simple, series, parallel and series-parallel circuits and diagnose failures*

*will be able to explain the difference between conventional and electron theories of current flow.*

*will be able to explain the difference between dynamic and static resistance as it applies to ohm's law.*

*will have a basic understanding of semiconductor operation and will be able to properly identify diodes, NPN & PNP transistors and zener diode symbols as used in wiring schematics.*

*Will be able to identify the value indicated on the DVOM based on displayed digits, decimal point location, scale selected and range indicator displayed.*

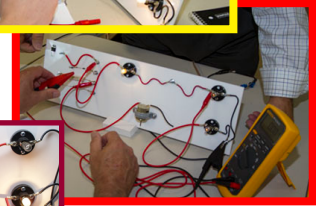
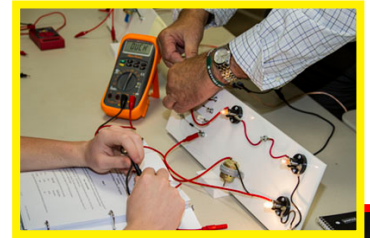
*Given a properly functioning DVOM the student will be able to measure voltage, amperage, and resistance in an electrical circuit.*

*will be able to explain and demonstrate voltage drop testing.*

*will be able to diagnose circuit or component failures using min-max-averaging and touch hold features of the DVOM*

*Will be able to successfully measure frequency, pulse width modulated and duty cycle signals*

*Will be able to make informed decisions on meter selection (true RMS vs. average responding) when confronted with non-sinusoidal AC signals*



**This is a hands on class. Bring Your DVOM/DMM!!**

A little about EAST...

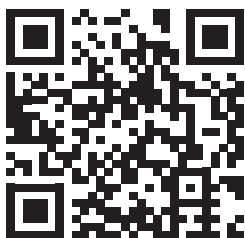
The course will be presented by EAST Training. EAST is a NJ based company that has provided (over 6100) quality, performance-based training classes Nationwide over the last 20 years. EAST has over 27,000 individual students, many of which have attended over 45 classes in EAST's on-going training program. Their students come from independent shops, OEM dealers, industry associations, municipal and state fleets, auto parts and equipment companies, mass merchandiser chains, Vo-Tech schools, and community colleges. EAST employs full time trainers with many years of experience in training not only professional technicians, but also professional instructors. EAST provides T<sup>3</sup> (train-the-trainer) services to several well-known industry schools, community colleges, and the United States Marine Corps. EAST trainers and curriculum designers develop their programs based on real world problem vehicles, diagnosed at their R&D center in Medford NJ. Courses are presented using PowerPoint presentations enhanced with computer animation and video clips for greater understanding of systems theory and operation. High-resolution light boxes are used to project slides and video images. EAST is an ASE accredited CASE provider, (certified 1/2001, recertified 12/2004, 3/2008, 3/2013 and 2019) an ASE Blue Seal of Excellence Certified support organization, and winner of the Automotive Training Managers Council (ATMC) National Automotive Training Excellence award. Visit EAST on the web at [www.eastraining.com](http://www.eastraining.com)



Accredited Training Provider



Scan the Quick Response code below to visit our site and read our blogs.



EAST Website



ATMC National Automotive Training Excellence Award Winner



All EAST classes are CASE Certified through ASE/ATMC. Upon successful completion, .8 CASE CEU's will be awarded along with a personalized Certificate of Achievement.