

# Toyota Prius 3

14025050

Discovery



Equals



Achievement

## THEPRA

Electude's integrated Toyota Prius 3 training program combines our state-of-the-art e-learning with a Prius 3 prepared with ten faults - ready for hands-on training. We provide everything a trainer and learner need to succeed in understanding how and why hybrid vehicles work, as well as completing diagnostic and repair procedures.

Our e-learning combines text, photo-realistic graphics and questions to guide the student from the basic components of the hybrid vehicle including drive types, the hybrid battery, ECVT drive train, and safety procedures. Using the provided break-out box for the power control module (PCM), the high-voltage battery and other measurement points, learners may complete diagnostic tasks independently and experience solving common problems.

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### High voltage accessory set

Our included set of accessories designed for safe work on high-voltage vehicles includes:

- Protective gloves
- Certified digital HV voltage tester
- Protective goggles
- Barrier tape
- 3-sided warning sign with suction cup
- 2-sided individual warning sign



# T-VARIA CONNECT

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## Our theory and practical assignments includes:

- Identify the various components of the Toyota Prius.
- Indicate the location of various components of the Toyota Prius.
- Identify the features of various components of the Toyota Prius.
- Identify the features of different drive types.
- Carry out various work procedures on hybrid vehicles.
- Identify the different variants of HV batteries.
- Identify the incoming and outgoing currents of the HV battery.
- Work with various safety features.
- Apply a diagnosis roadmap to a failure on the Toyota Prius.
- Analyse the various battery parameters.
- Identify the function of the ECVT components.
- Identify incoming and outgoing currents of the HV battery.
- Analyse various energy currents from the ECVT.

## ELECTUDE'S E-LEARNING COURSE OVERVIEW

### Preliminary theory with Toyota Prius 3 (basic)

- Voltage free switching HV system
- Working on hybrid vehicles
- Working with voltage
- Full hybrid
- Rotating magnetic field
- Permanent magnet synchronous motor - basic
- Synchronous motor with permanent magnet - advanced
- Hybrid vehicle with planetary gear system
- Enabling HV system
- Interlock
- Short circuit protection
- Permanent insulation monitoring
- Battery Management System
- State of Health
- Passive balancing
- State of Charge
- Temperature control HV battery

### Practical assignments with Toyota Prius 3 (basic)

- Prius 3: Safety and switching voltage-free
- Prius 3: Recognise and identify
- Prius 3: Drive type on the dynamometer

### Preliminary theory with Toyota Prius 3 (advanced)

- HV battery
- HV cables
- Battery Management System
- State of Health
- Passive balancing
- State of Charge
- Temperature control HV battery

### Practical assignments with Toyota Prius 3 (advanced)

- Prius 3: HV battery
- Prius 3: HV battery on the dynamometer
- Prius 3: Guided fault finding

### Fault assignments with Toyota Prius 3 (advanced)

- Prius 3: Failure 1
- Prius 3: Failure 2
- Prius 3: Failure 3
- Prius 3: Failure 4
- Prius 3: Failure 6

### Preliminary theory with Toyota Prius 3 (specialists)

- Electric drive
- Energy density
- Energy flow in hybrid vehicles
- Efficiency
- Loss of driving form
- Hybrid vehicle with planetary gear system

### Practical assignments with Toyota Prius 3 (specialists)

- Prius 3: HV battery condition
- Prius 3: Energy currents introduction
- Prius 3: Energy currents during electric driving
- Prius 3: Energy currents during recovery
- Prius 3: Energy currents during combined driving
- Prius 3: Control MG2, voltage and current

### Fault assignments with Toyota Prius 3 (specialists)

- Prius 3: Failure 5
- Prius 3: Failure 7
- Prius 3: Failure 8
- Prius 3: Failure 9
- Prius 3: Failure 10
- Prius 3: Teacher's manual
- Electric motor
- Lorentz force
- Magnetism
- Induction
- Electric motor: permanent magnet motor
- Rotating magnetic field
- Permanent magnet synchronous motor - basic
- Squirrel cage induction motor - basic

### Practical assignments with Electric Motors Trainer (basic)

- Electric Motors Trainer: Permanent magnet motor
- Electric Motors Trainer: Series-wound motor
- Electric Motors Trainer: Asynchronous squirrel-cage motor
- Electric Motors Trainer: Synchronous three-phase electric motor

### Preliminary theory with Electric Motors Trainer (advanced)\*

- Electric motor permanent magnet motor
- Synchronous motor with permanent magnet - advanced
- Squirrel cage induction motor - advanced

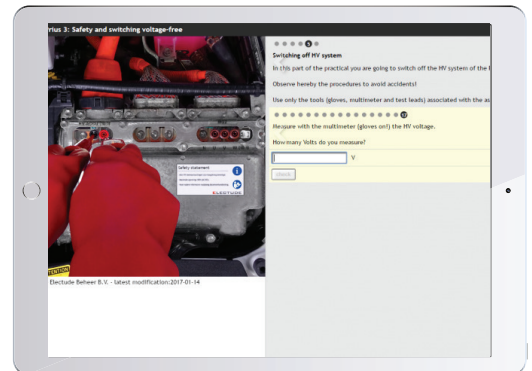
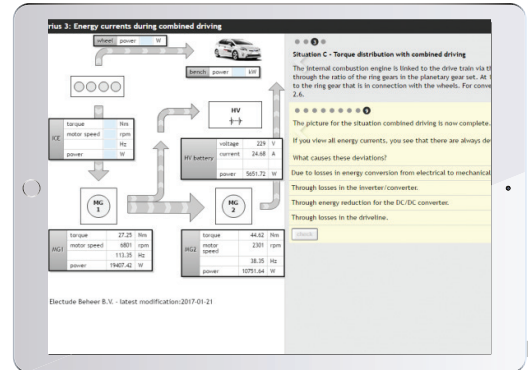
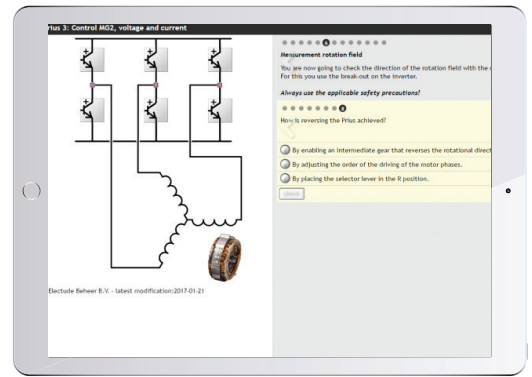
### Practical assignments with Electric Motors Trainer (advanced)

- Electric Motors Trainer: Permanent magnet motor generator
- Electric Motors Trainer: Series-wound motor generator
- Electric Motors Trainer: Squirrel-cage motor generator
- Electric Motors Trainer: Synchronous three-phase motor generator

### Duration

- Preliminary theory with Electric Motors Trainer (basic) - 694 min
- Practical assignments with Electric Motors Trainer (basic) - 340 min
- Preliminary theory with Electric Motors Trainer (advanced) - 206 min
- Practical assignments with Electric Motors Trainer (advanced) - 149 min

\*Separate license may apply for the Preliminary theory.



All product specifications are subject to change without prior notice.

