

# HEEA

## Highway Electrical Association

### Information Required and Learner Actions

1. The Learner must bring:
  - Functioning calculator.
  - A pen, pencil and rubber

### 401.1 - Basic Electrical Theory

<b>Duration:</b>	2 days
<b>Suitable for:</b>	This course provides the required level of underpinning knowledge as required for the Level 2 and Level 3 Highway Electrical Competence Based Qualification (NVQ) where a good understanding of common calculations for resistance and power are required and recognition of a range of common components, for example during installation processes
<b>Course aim:</b>	This course aims to provide employees working within the Highway Electrical Sector with the knowledge and key skills to facilitate the understanding of fundamental electrical principles, and the application within day-to-day activities.
<b>Prerequisites:</b>	<p>In order to gain maximum benefit and learning outcomes from this course there are a number of training modules, which are required before attending. A complete list of pre-course requirements are available from the Training Specification located in the Download section of the HERS web site at: <a href="https://thehea.org.uk/hers-hesa/hers-resources/">https://thehea.org.uk/hers-hesa/hers-resources/</a> - Category: HERS Handbook and Training Specification</p> <p>** Confirmation will be required that the prerequisites have been achieved **</p>
<b>Course Objectives:</b>	<p>On completion of the course learners will be able to:</p> <ul style="list-style-type: none"><li>• State how electricity works</li><li>• Explain the difference between AC and DC circuits</li><li>• Define current, voltage, resistance, power, common conductors and common terms</li><li>• State and use Ohms Law</li><li>• Define parallel and series circuits</li><li>• State &amp; use Power calculations</li><li>• Identify a limited range of common electrical components and their functions</li><li>• State typical earthing arrangements and bonding</li><li>• Read basic electrical circuit diagrams</li></ul>
<b>What to do now:</b>	<p>Further details and booking may be made from the website: <a href="https://thehea.org.uk/hea-specialist-training/">https://thehea.org.uk/hea-specialist-training/</a></p> <p>Or by contacting the HEA (Highway Electrical Association) Office, on 01903 705140</p>

## Course Programme

Please note that timings may vary from course to course – and the detailed order may change, to take into account individual learning needs and to ensure an effective learning experience for all Learners

<b>Time</b> (All timings approximate and may vary)	<b>Content of Learning Sessions</b>
<b>Day 1</b> <b>08:45</b>	<b>Arrival, coffee and Learner Introductions</b>
<b>AM</b>	<ul style="list-style-type: none"><li>• Introduction, How electricity works</li><li>• Voltage, current, Resistance Power and Inductance</li><li>• Direct Current, Alternating Current in Power Circuits</li><li>• Series and Parallel Circuits</li></ul>
<b>PM</b>	<ul style="list-style-type: none"><li>• Ohms Law</li></ul>
<b>Day 2</b> <b>08:45</b>	<b>Refreshments</b>
<b>AM</b>	<ul style="list-style-type: none"><li>• Day one recap</li><li>• Using Power Calculation</li><li>• Common Circuit Components</li></ul>
<b>PM</b>	<ul style="list-style-type: none"><li>• Typical Earthing Arrangements and Bonding</li><li>• Electrical Circuits, depending on the cohort either PL, Traffic</li></ul>
<b>13:00</b>	<b>Summative assessments/ Review Mark</b>
<b>17:00</b>	<b>Course Conclusion / Feedback</b>


# HEA Training

Include▶▶Involve▶▶Inspire!™

## Course 401.1 - Basic Electrical Theory

at The Granary, Manor Farm, Brogborough, Milton Keynes MK43 0YD (<http://www.thegranarypage.co.uk/Location.htm>)

(By completing this booking form, you are confirming that the Employing Organisation has the employee consent to provide the information required below for Learner registration and certificate processing)

<b>Learner First Name</b>	<b>Learner Surname</b>	 <b>Operative register to HERS?</b>	<b>Have the Prerequisites been met</b> (See Page 1)				<b>Course Date Required</b>	<b>Course Location</b> (see website)	<b>HEA</b> <b>Your Organisation Status</b> <b>HEA Member?</b>

If you answered No to any of the above questions, then please provide further information below.

### Dietary and Special Consideration:

Do you require help with reading or writing?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Do you consider yourself to have a disability that may impact on your learning experience and outcome?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Do you have any dietary requirements?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Is English your first language?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>

If you answered Yes to any of the above questions, then please provide further information below.  
(This information is for the use of the HEA only and will not be shared with any third parties).

The cost of this course per learner is **£270 + VAT for HEA MEMBERS** and for **HERS REGISTERED** and **Non - HEA MEMBERS - £340 + VAT** (Inclusive of course material, course certificate, food and refreshments on the day).

<b>Organisation Name:</b>	<input type="text"/>	<b>Contact Tel</b>	<input type="text"/>
<b>Contact Name:</b>	<input type="text"/>	<b>Contact E-Mail:</b>	<input type="text"/>

CANCELLATION FEES - Where cancellation is made 14-28 days before course date fee will be charged at 50%. Where cancellation is made less than 14 days before course date fee will be charged at 100%. Prices are inclusive of food & course venue – please arrange your own accommodation if required. HEA Training reserves the right to change the date of the training if minimum viable learner numbers are not met.

<b>Purchase Order No.:</b>	<input type="text"/>	<b>Signed:</b>	<input type="text"/>	<b>Date:</b>	<input type="text"/>
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Please email your completed form to [training@thehea.org.uk](mailto:training@thehea.org.uk) or post to HEA, Highdown House, Littlehampton Road, Ferring, West Sussex, BN12 6PG  
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