



Training Services
Short Course Training
Electrical Solutions

centrica
Business Solutions



About us

Your training, safe in professional hands.

Our short courses provide you with skills that are great for your business and for your customers. Study with us and you'll get the professional credentials that provide opportunities, open doors and give your customers the reassurance that they expect.

Clear and Compact Courses

Whether you are starting out or gaining further skills, our clear and compact courses make the most of your time. You'll pick up valuable practical knowledge and skills from our experienced tutors. Our Training Centres have been trading for over 15 years establishing their brand and helping to improve the standard and quality of electrical training within the industry.

We focus our tuition on your areas of interest, bringing this alive with real life experience and examples. Even if you have been out of the classroom for some time our team will support you to enable you to achieve the qualifications that you require.

Training close to home

Our Training Centres are approved by City & Guilds, EAL, SPA and CompEx to name just a few. What's more they are located throughout the UK to ensure that you can find a course close to you. If it suits you better, many of our courses can be delivered on your site, saving you time and money on updating your qualifications.

Our Affiliates



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Locations



Why train with Centrica Business Solutions?

Meet the challenges that you face

It's a tough world out there, we don't need to tell you that. But it's important to us that we help you to prepare for whatever the future may hold. We're passionate about electrical training and aspire to improve the quality and standard of training within the electrical industry. That's why we are keen to support those who look to further their skills which will support you in improving the level of service to meet your customers needs.

Full and Professional Attention

We aim to deliver training simply and efficiently, with expertise and flexibility.

Our courses will:

- Help you to reduce risk and improve health and safety compliance
- Minimise business disruption and improve performance
- Be delivered by industry experts with relevant experience and insight
- Actively involve you through small class sizes
- Meet the latest industry standards and legislation

If you are concerned about stepping back into the classroom, don't worry!

To us you are a professional. You want information and you want it as simply as possible. We'll take you through your training step by step to ensure that you achieve the course objectives and we deliver on your desire to improve your professional skills.

Our Training brochure provides a brief outline of the courses and what you can expect.

Please call our team on 0800 980 8150 for further information, help and advice on the right level of training for you.

Price Match Promise

Our price match promise ensures you'll never pay more for any like-for-like course* and we're certain the electrical training solutions we deliver will always meet your needs and expectations.

*Terms and conditions apply

Electrical Courses City & Guilds Series

If you are self-employed, a contracting electrician or are responsible for a team of people within the electrical industry, it is your responsibility to ensure that you have an understanding of electrical regulations that impact yourself, your environment and your operation.

Our City & Guilds courses offer the chance for you to gain essential electrical training recognised by a formal qualification awarding body covering specific aspects of the electrical industry.

You get fresh practical insights into your field, knowledge that you can put to work straight away and a recognised qualification that goes towards demonstrating your professional competence within the electrical industry.

City & Guilds 2377 (PAT Testing)

Award in Competence for the Inspection
and Testing of Electrical Equipment

2
days

£210
+ VAT

Developed in line with the latest IET Code of Practice, this course focuses on the formal inspection, testing and recording of electrical equipment, with special regard for portable appliance testing.

Using hands-on, practical tuition, it gives you the skills to meet typical contemporary challenges and prepare you for the City & Guilds 2377-22 examination. You also have the option to take the City & Guilds 2377-32 examination (at an extra cost). The Assessment Method includes an open book online examination and a practical assessment.

Course Content

- The legal requirement, purpose and frequency of Inspection and Testing of Electrical Equipment
- The main inspection and testing requirements prescribed in the IET Code of Practice for In-Service Inspection and Testing of Electrical Equipment
- Equipment construction and definition
- Approved testing procedures with 'Portable Appliance Testers'
- Establish maintenance charts, registers and recording of results
- Introduction to test instruments
- Equipment inspection and practical testing
- Test result analysis

City & Guilds 2382-15 (17th Edition)

Award in the Requirements for Electrical Installations – BS7671:2008
including 2015 Amendment

4
days

£420
+ VAT

This course provides electrical personnel with clear and thorough preparation for the City & Guilds 2382-15 17th Edition BS7671 Wiring Regulations exam.

To competently carry out the inspection and testing of fixed wiring installations, a fundamental understanding of the 17th Edition Regulations is invaluable. If you've yet to complete a wiring regulations training programme, this course is also for you.

The course builds to a 2 hour open book examination consisting of 60 multiple choice questions.

Course Content

- The legal status and association with statutory documents
- Scope, object and fundamental requirements of safety
- Assessment of general characteristics
- Protection for safety
- Selection and erection of equipment
- Inspection and testing
- Specialist installation or locations
- Preparation for the C & G 2382-15 examination

City & Guilds 2391-50

Award in the Initial Verification and Certification of
Electrical Installations (replaces City & Guilds 2394-01)

4
days

£550
+ VAT

After carrying out electrical installation work it is necessary to ensure the new work meets the requirements of BS7671. An inspection and test of this work must be carried out to confirm it is safe to be put into service.

This City & Guilds four-day course is intended for people who need to carry out this initial verification of their work. It covers single and three-phase installations and is relevant to domestic, commercial and industrial environments.

Assessment methods include a practical inspection and test on a simulated installation (initial verification), a short written examination and an open book online multiple choice exam consisting of 40 questions.

Course Content

- Requirements of Safe Isolation
- Reasons for initial verification of electrical installations
- Safe testing of electrical installations
- Principles for working dead
- Principles for working live
- Documentation and Certification
- Safe Systems of Work

It is possible to also complete the City & Guilds 2391-51 – Periodic Inspection, Testing and Certification of Electrical Installations (this course replaces City & Guilds 2395-01). Please contact one of our course advisors should you wish to combine the two qualifications.

City & Guilds 2391-51

**Award in Periodic Inspection, Testing and Certification
of Electrical Installation (replaces City & Guilds 2395-01)**

4
days

£550
+ VAT

The Electricity at Work Regulations requires electrical installations to be maintained so as not to give rise to danger. One common method of meeting this requirement is to carry out a periodic inspection and test of an electrical installation and report on its condition.

This four-day City & Guilds level 3 course is aimed at personnel who wish to carry out inspection and testing of existing electrical installations. It is also relevant to anyone who commissions or receives reports on the condition of electrical installations.

The course covers the latest requirements of BS7671, IET Wiring Regulations and is relevant to single and three-phase installations, domestic, commercial and industrial installations. Please note that this course requires a good understanding of electrical principles and a knowledge of electrical installations.

Assessment methods include a visual inspection exercise, practical inspection and test on a simulated installation (periodic inspection), a short written examination and an open book online multiple choice exam consisting of 40 questions.

Course Content

- Requirements of Electricity at Work Regulations
- Safe systems of work
- Requirements for safe isolation
- Safe testing of electrical installations
- Principles for working dead
- Principle for working live
- Testing sequence
- Interpretation of test results
- Documentation and reporting

It is possible to also complete the **City & Guilds 2391-50 – Initial Verification and Certification of Electrical Installations qualification** (this course replaces City & Guilds 2394-01). Please contact one of our course advisors should you wish to combine the two qualifications.

City & Guilds 2391-52

**Award in the Initial Verification and Periodic Inspection,
Testing and Certification of Electrical Installations
(replaces City & Guilds 2394-01 & 2395-01)**

5
days

£650
+ VAT

Formerly known as City & Guilds 2394/5, this five-day course is a combination of the 2391-50 and 2391-51 training courses and will allow candidates to complete both qualifications without attending the centre on separate occasions.

The course includes the same level of content as covered in the main courses.

Assessment methods during the five-day course include a short written examination and an open book online multi-choice exam consisting of 40 questions. A practical assessment on a simulated installation and a visual inspection exercise will take place shortly after the course.

City & Guilds 2396-01

Award in the Design and Verification of Electrical Installations

5
days

£525
+ VAT

Whenever new installation works or alterations are carried out within premises, someone will have to make crucial decisions. At the design stage, or when it comes to installation and testing, the competence of the person making those decisions is judged.

As the highest level course relating to BS7671 offered by City & Guilds, and pitched to an experienced and knowledgeable level, this qualification is chosen by many as evidence of their professional competence.

It is mainly aimed at electrical trades people and electrical managers responsible for making design decisions within an electrical installation, and is achieved by completing a two-part examination. This consists of a three-hour written assessment and a design project.

You will need a sound working knowledge of electrical installation practices, preferably with some knowledge of design and verification.

Course Content

- Overview of regulations
- Installations characteristics
- Wiring systems
- Cable selection and design
- Discrimination and diversity
- Earthing and earthing systems
- Special installations
- Inspection and testing, including pricing
- Documentation and certification
- Project design



City & Guilds Accredited Electrical Skills Courses

The following courses have been specifically designed to supplement your primary knowledge and qualifications.

These courses have been designed, written and prepared by Centrica Business Solutions and have been recognised for their quality, delivery and content by the City & Guilds Accreditation Scheme.

These courses are only available through Centrica Business Solutions.

BS7671: 2008 (Amd 3 2015)

17th Edition Wiring Regulations Update Course

1
day

£99
+ VAT

It is the responsibility of every contracting electrician to ensure they are fully conversant with current electrical regulations, but it is equally important that maintenance electricians and electrical managers have sound knowledge of the regulations that relate to their environments and operations.

This course is primarily aimed at electrical tradespersons and electrical managers to make them aware of the changes introduced and implications to design and installation practices. The course will also be of great benefit to companies that intend to perform inspection and testing of fixed wiring installations by providing a sound knowledge of the latest version of the 17th Edition Wiring Regulations.

The course fee includes; comprehensive course notes, refreshments and a buffet lunch. Delegates will require an up to date copy of the latest BS7671 publication which can be purchased from us on request.

This course is not a City & Guilds qualification and there is no formal qualification achieved after this course. However, there is Centrica Business Solutions Accreditation. If you require a formal 17th Edition qualification, the City & Guilds 2382-15 course would be the preferred route.

Course Content

The course focuses on changes brought in by Amendment 3 2015, including:

- Numbering System
- Part 2 – Definitions
- Chapter 41 – Protection against electric shock
- Chapter 42 – Protection against thermal effects
- Chapter 51 – Common rules
- Chapter 52 – Selection and erection of wiring systems
- Chapter 53 – Protection, isolation, switching, control and monitoring
- Chapter 55 – Other equipment
- Part 7 – Special Installation & Locations
- Appendix 3 – Time/current characteristics of overcurrent protective devices and RCDs
- Appendix 6 – Model forms for certification and reporting
- Appendix 14 – Measurement of Earth Fault Loop Impedance

Basic Electrical

City & Guilds Accredited



With companies in many market sectors and industries radically streamlining their maintenance and technical workforce departments, the onus is on managers to use non-electrical personnel for routine electrical duties.

This course provides an answer to legitimate management concerns.

It's designed to assist non-electrical employees prepare for work on a range of electrical systems, and helps companies towards compliance with UK legislative requirements regarding the use of such personnel for electrical tasks.

It is aimed at anyone who may have electrical tasks related to their work for example mechanical maintenance engineers, servicing and equipment installation personnel and others who work with low voltage electrical equipment and systems.

Course Content

- Basic electrical principles
- Electrical power and units of measurement
- Electrical test instrumentations
- Cable and wiring systems
- Conventional circuit layout
- Electrical diagrams
- Health & Safety legislation (related to electricity in the workplace)
- Safe isolation procedures for low voltage electrical circuits
- Safe working practices

Motor Principles and Testing

City & Guilds Accredited



1
day

Including
Accreditation
£150
+ VAT

Normally taken as an extension to the three-day Basic Electrical course, this course focuses on the theory and practical issues related to electrical motors, including principles of operation, wiring connections, starting methods, testing and fault diagnosis.

Companies intending to task non-electrical personnel with routine electrical duties on low voltage electrical equipment and systems will find it particularly useful.

It's also ideal as a 'stand alone' or independent course for those requiring specific information and training relating to the basic electrical maintenance of motors, control devices and associated accessories.

Course Content

- AC and DC motor principles
- Methods of starting
- Methods of connection
- Testing procedures
- Fault finding techniques
- Discussion and questions

Safe Access to Electrical Panels or Enclosures

City & Guilds Accredited



1
day

Including
Accreditation
£150
+ VAT

The growing pressure upon company managers to ensure personnel are operating in a safe manner suggests that some level of basic training is required.

This course helps raise the level of electrical safety awareness for those required to access low voltage electrical panels or enclosures, for example machine and process operators.

Using a presentation and practical approach, it looks at key aspects of electrical safety in relation to electrical panel enclosure. It examines protective device resetting, process adjustment/configuration and taking readings, as well as the requirements of current legislation.

The course is mainly aimed at non-electrical/technical employees who, although not expected to hold specific electrical responsibilities, have a duty to their colleagues and their own personal safety through current employment legislation.

Course Content

- Health & Safety legislation (related to electricity in the workplace)
- Risks present when accessing a low voltage electrical enclosure or panel
- Safe working practices specific to electrical enclosure or panel access
- Resetting of a range of electrical motor thermal overloads, circuit breakers and motor drives
- Most appropriate or suitable methods to minimise the potential damage to process plant, equipment, system motors or connected equipment
- Risks related to common electrical equipment machines or process systems

Safe Electrical Isolation of Low Voltage Systems

City & Guilds Accredited



1
day

With C&G
Accreditation
£150
+ VAT

Your company might have to entrust electrical isolation tasks not only to electrical personnel, but also to non-electrical staff with some experience of electrical systems (and who may require authorisation to carry out isolation for maintenance purposes).

Including formal Permit to Work procedures for on-site operation, this course provides staff with the knowledge needed to perform safe isolation of low voltage systems and equipment.

Course Content

- Overview and relevance of Low Voltage safety rules
- Associated procedures, basic risk assessment and documentation prior to isolation
- Types of isolating devices
- Methods of isolation
- Proving or verifying an isolation
- Controlling isolation
- Removing an isolation and returning a system to normal operation

Supplementary Electrical Courses

The role of 'Duty Holder' demands competence and a sharp awareness of electrical legislation.

Centrica Business Solutions offers a range of courses that encompasses the Health and Safety at Work Act and supporting electrical legislation. We have expertise in supporting businesses to realise their responsibilities and can support them in achieving compliance.

Minor Electrical Works including Inspection and Testing

2
days

£195
+ VAT

If you're a service or installation engineer, you'll find that, increasingly, you're required by law to complete a Minor Electrical Works Certificate following a domestic/industrial installation.

This course will allow you to provide adequate certification on completion of your work in line with the requirements of BS7671.

Although the course focuses directly on the inspection and testing of minor works, you also cover some issues relating to installation practices.

It's recommended that you have a basic understanding of electrical installation practices.

Course Content

- Overview of the relevant legislation
- Earthing and circuit protection arrangements
- Minor Works Certification
- Inspection techniques
- Test instrumentation, terminology and interpretation
- Safe electrical isolation procedures
- Related theory and practical assessments

Duty Holder

1
day

£125
+ VAT

If you're an Electrical Duty Holder, or if you want to know more about obligations under the Electricity at Work Regulations 1989, this course is for you.

Although aimed at electrical persons, it's also ideal for non-electrical persons with a responsibility for electrical safety.

Covering all systems voltages, the course focuses on electrical systems, installations, equipment and procedures operating at Low Voltage (up to 1000 volts AC).

Please note that the course specifically excludes mines, quarries, public distribution or generating equipment.

Course Content

- Who is a Duty Holder
- Relationship with other legislation
- Relationship with non-statutory documents
- Enforcement and penalties
- Designing safe electrical systems
- Maintaining electrical systems in a safe condition
- Ensuring safe work activities, Risk Assessments, Safe Systems of Work and Permit to Work Systems
- Providing, maintaining and using protective equipment
- Ensuring electrical systems are suitable strength and capability in all conditions
- Ensuring electrical systems are suitable for adverse or hazardous environments
- Basic protection
- Fault protection
- Suitability of connections
- Protecting against overcurrent
- Isolating and Switching
- Safe isolation of supplies and working dead
- Live working
- Adequate working space, safe access and lighting
- Demonstrating competency
- Case studies

Electricity at Work Regulations 1989

1
day

£125
+ VAT

A perfect course for those who are looking to gain an awareness of the Electricity at Work Regulations 1989.

Covering all system voltages, and investigating electrical systems, installations, equipment and procedures operating at Low Voltage (up to 1000 volts AC), it is suitable for both electrical persons and non-electrical persons with responsibility for electrical safety.

This course specifically excludes mines, quarries, public distribution or generating equipment.

Course Content

- Extent and application of regulations
- Relationship with other legislation
- Relationship with non-statutory documents
- Enforcements and penalties
- Regulation 4 – systems, work activities and protective equipment
- Regulation 5 – strength and capability of electrical equipment
- Regulation 6 – adverse or hazardous environments
- Regulation 7 – Insulation, protection and placing of conductors
- Regulation 8 – Earthing or other suitable precautions
- Regulation 10 – Connections
- Regulation 11 – Means of protecting against excess of current
- Regulation 12 – Means of cutting off the supply and for isolation
- Regulation 13 – Working on equipment made dead
- Regulation 14 – Working on or near live conductors
- Regulation 15 – Working space, access and lighting
- Regulation 16 – Competency
- Regulation 29 – Defence

Emergency Lighting to BS5266 Overview

1
day

£125
+ VAT

This course is aimed at engineers, electricians and other personnel who need an understanding of emergency lighting to BS5266.

You gain essential knowledge of different types of emergency lighting, appropriate schemes, required documentation, and inspection and testing requirements.

Course Content

- Appropriate scheme types
- UK law and regulatory authorities
- BS5266 Part 1
- Documentation
- Inspection and Testing
- Products and systems

Earthing and Bonding

1
day

£125
+ VAT

The course provides electricians and electrical engineers with a focused awareness of IET requirements relating to Earthing and Bonding of Low Voltage electrical installations.

It also aims to help Duty Holders comply with Regulation 8 of the Electricity at Work Regulations 1989.

Course Content

- The role of Earthing and Bonding
- Terminology
- Automatic disconnection of supply
- Protective devices
- Earthing systems
- Basic fault protection
- Exposed and extraneous conductive parts
- Protective bonding
- Supplementary bonding
- Maximum permitted disconnection times during earth faults
- Additional protection
- Suitable materials for protective conductors
- Selecting suitably sized protective conductors
- The general requirements to BS7671
- Special locations of installations
- Transformer and generator earthing (overview)
- Principles of inspection and testing

The Provision and Use of Work Equipment Regulations 1998 (PUWER)

1
day

£125
+ VAT

This course covers the basic requirements of the Provision and Use of Work Equipment Regulations 1998, as well as the cross-over between the Electricity at Work Regulations 1989 and the Workplace (Health, Safety and Welfare) Regulations 1992.

Course Content

- Suitability of work equipment
- Maintenance, operations and inspections
- Dealing with specific risks
- Information, instructions and training
- CE marking
- Dangerous parts of machinery and guarding
- Protecting against specific hazards
- Extremes of temperature
- Change control
- Controls, control systems, markings and warnings
- Isolation
- Stability
- Lighting
- Mobile work equipment
- Power presses

Electrical Risk Assessment

1
day

£125
+ VAT

Aimed at engineers, electricians and other personnel responsible for electrical safety in the workplace, this course looks closely at the generalised risk assessments documented in the Management of Health and Safety Regulations 1999, and offers clear and effective methods of compliance.

The course is split into two parts; one deals with the inspection of electrical systems and equipment, the other looks at evaluating risk and the measures to minimise or eliminate risk.

Course Content

- Sections relating to the Provision and Use of Work Equipment Regulations (PUWER)
- Sections relating to the Management of Health and Safety Regulations 1999
- General risk assessment relating to electrical machinery
- Risk assessment associated with the European Machine Directives and the Supply of Machinery Regulations 1992

Electrical Safety Awareness



1
day

£125
+ VAT

This is aimed at those who require an awareness of the dangers of electricity, and the basic principles for maintaining a safe environment.

Suitable for non-electrical people, as well as providing a useful refresher for electrical personnel, it specifically looks at systems operating at 230 volts and 400 volts, but also considers reduced voltage systems and supplies at extra low voltages.

Course Content

- Applicable legislation and non-statutory documents
- Risks associated with electrical safety – electric shock, burns, arcing, fires, explosions and secondary effects
- Insulating conductors
- Enclosures and barriers
- Fuses and circuit breakers
- Earthing
- Double insulated equipment
- Wiring systems
- Maintenance, inspection and testing
- User checks
- Examples of dangerous situations
- Action for defective equipment
- Importance of electrical design
- Electrical certification
- Competence and safe systems of work

Adjustable Frequency Drives for Motor Controls

1
day

£125
+ VAT

This introductory level training course is aimed at electrical, mechanical and other servicing personnel responsible for the commissioning and maintenance of low voltage variable frequency drives used for motor speed control.

Using the latest technology, it explores the basic operational principles of adjustable frequency drive units, offering an in-depth analysis of commissioning techniques and controlling features.

It's recommended that candidates have some basic electrical knowledge as well as:

- Familiarity with common electrical quantities
- Awareness of the principles and relevant terms for three-phase AC induction motors
- Knowledge of the application of basic test instruments

Course Content

- Applications for variable speed control systems
- Overview of the principle of operation
- Constituent parts of variable frequency drives
- Signal and power cable considerations
- Setting and commissioning procedures
- Interrogation and interpretation of the variable frequency drive's software parameters
- Generic fault code diagnosis and serviceability for VFDs/AFDs
- Appropriate test and test instruments
- Preventative measure to improve drive and motor service life

High Voltage Awareness

1
day

£125
+ VAT

This course gives an understanding of the dangers that may arise from operating, maintaining and working near electrical systems that operate above 1,000 VAC and gives guidance to identify safe working procedures.

It will provide a basic understanding of HV distribution systems and equipment and give awareness of Safe Systems of Work as required by the Electricity at Work Regulations 1989.

The course is aimed at Facility Managers and Supervisors with responsibilities for HV systems.

Course Content

- Voltages in common uses
- Effect of current on the body
- Overview of the Electricity at Work Regulations 1989
- Duty Holders responsibilities
- An introduction to HV switchgear and systems
- An overview of Safe Systems of Work
- Application of Electricity Safety Regulations to HV systems
- The requirements for the Issue of Safety documents
- Records and documentation required to ensure compliance with the law

Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)

2
days

£195
+ VAT

Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) is a set of regulations concerned with protection against risks from fire, explosion and similar events arising from dangerous substances used or present in the workplace. The regulations apply to employers and the self-employed.

Course Content

- An overview of the scope and requirements of DSEAR
- Knowledge of the relationship of DSEAR to other statutory regulations
- Knowledge of the application of DSEAR
- The potential consequences of non-conformity
- Criteria to determine a dangerous substance
- What the ATEX directive is and its application
- Basic concepts of electrical protection with respect to dangerous substances within the workplace
- What a potentially explosive atmosphere is and how it can form
- Concepts of area classification
- The effect of electrostatics regarding dangerous substances and potentially explosive atmospheres

Electrical Machine Safety

3
days

£350
+ VAT

With the latest introduction of the 'Provision and Use of Work Equipment Regulations' (PUWER), and the associated legislation for power presses, woodworking and lifting operations, this course involves the specific methods necessary to meet the legal requirements.

The course also covers the 'European Machinery Directives' and the 'Supply of Machinery Regulations 1992' both of which form legislative requirements for machine installation and use.

It is primarily aimed at personnel who hold the responsibility for safety relating to electrical machinery. Generally, these will include Electrical and Mechanical Managers, Engineers and Supervisors, as well as Safety Practitioners and Safety Representatives. It may also be of great benefit to companies that intend to employ electrical personnel to perform additional routine electrical maintenance or servicing duties on a diverse range of existing process control systems related for process or manufacturing.

Basic or fundamental electrical skills, hand tool skills and knowledge of the Electricity at Work Regulations 1989 and BS7671 would be advantageous for this course.

Course Content

- Overview of relevant Health and Safety legislation (EAWR 1989, PUWER 1998 related to low voltage electrical systems)
- Legislative documents related to the above in respect of power presses, woodworking and lifting machinery
- The relevant non-statutory British-European standards regarding low voltage control systems
- General risk assessment relating to electrical machinery
- Risk assessment associated with compliance with the 'European Machine Directives' and the 'Supply of Machinery Regulations 1992'
- Machine guarding and safety interlocking
- Safety circuitry and PLC controlled safety issues
- Electro sensitive protective systems
- Knowledge of the requirements and use of photoelectric light curtains
- Shock protection requirements
- Specification and selection of control and distribution cables for the application
- Specification and selection of control and circuit protective devices
- Wiring colour codes
- Overview of electrical functional safety devices and circuit arrangements
- EMC considerations and system component segregation
- Hardware installation, layout considerations and component identification
- Electrical drawing conventions and symbolic notations
- Electrical test instrumentation, criteria and documentation

Abrasive Wheels

1/2
day

£50
+ VAT

This course is aimed at any person who as part of their working duties are involved in using or changing abrasive wheels in the workplace.

Upon completion of the course a certificate will be issued and will be valid for three years.

Course Content

- Health and safety legislation and regulations
- Accidents
- Fire
- Burst wheels
- Selection
- BS marking
- PPE
- Storage
- Inspection of machines and wheels
- Type 27 – Reinforced Depressed Centre
- Type 41 – Reinforced Straight Side Cutting
- Type 42 – Reinforced Depressed Centre Cutting

Asbestos Awareness



1/2
day



£65
+ VAT

This course is aimed at any person who under the Control of Asbestos Regulations 2012 requires mandatory training. For example, those likely to be exposed to asbestos fibres at work. This includes maintenance workers and others who may come into contact or who may disturb asbestos as well as those involved in asbestos removal work. The regulations also include those who may be supervising such employees.

On completion of this course delegates will receive a certificate of attendance.

Course Content

- What is asbestos and the possible health hazards of asbestos
- Asbestos in building and materials likely to contain asbestos
- Emergency procedures
- The Control of Asbestos Regulations

Generic PLCs

3
days

£420
+ VAT

For those companies that do not use a specific type of Programmable Logic Controller (PLC) platform, or a system to fulfil process automation requirements, this course introduces electrical and non-electrical maintenance, service personnel and engineering managers to the basic operational principles for most PLC systems.

Focusing on one of the most familiar programming representations, Relay Ladder Logic (RLL), the course uses an exceptional PLC simulation / emulation software package that removes the complications associated with vendor specific, proprietary PLC interfacing software, allowing a clear understanding of fundamental programming techniques.

The course assumes little or no previous knowledge of PLCs. It's designed for those currently working with the engineering maintenance industry, who find a growing need to maintain and further develop PLC controlled systems, plant or equipment.

Course Content

- What is a PLC and overview of the principles of operation
- Creation of new and editing existing PLC automation programmes
- Overview of PLC control program representations
- Common instructions of automation requirements
- Program development for simulated applications
- Save and restore PLC programs
- Documentation and reporting
- Overview of physical PLC hardware and software
- Practical demonstration sessions with physical PLC systems from common vendors

Mitsubishi PLC

5
days

£795
+ VAT

This introductory level training course looks at the configuration, maintenance, documentation, and programming of PLCs from the Mitsubishi FX series, using MS Windows WinFX or GX interfacing software.

Designed for those new to Mitsubishi FX PLCs and associated software, the course provides a general overview of the past and present Mitsubishi PLC range, with a focus on the FX modular platforms.

It targets relevant maintenance issues associated with the PLC-controlled systems, while certain aspects of programming PLCs to perform 'end user' functions are covered within a series of practical automation assignments.

Course Content

- Overview of the principles of operation for the Mitsubishi PLCs and the WinFX PLC automation software editing programme
- Creation of new WinFX or GX automation projects
- FX PLC automation project hardware types and configuration
- FX signal module input and output and internal memory addressing structures
- Changing the PLCs operating mode
- Monitoring a PLC online
- Save and restore PLC automation project database to and from the standard internal or external data storage media
- FX PLC automation project documentation and reporting
- Searching the FX PLC automation project for applicable instruction set references

Siemens S7 PLC

5
days

£795
+ VAT

This course teaches the configuration, maintenance, documentation and programming of PLCs from the Siemens S7 family, using standard Siemens S7 interfacing software. It concentrates on the S7-300 platform, but also makes comparison with the S7-400 range.

An introductory level training course, it's designed for those who are just beginning to work with the Siemens S7 PLCs and associated software.

Offering a general overview of past and present Siemens PLCs, it focuses on the S7 platforms, examining relevant maintenance issues associated with PLC-controlled systems.

Certain aspect of programming PLCs to perform 'end user' functions are covered within a series of practical automation assignments.

Course Content

- Overview of the principles of operation for the Siemens S7 PLCs
- An overview of the Step 7 PLC automation software editing programme
- S7 PLC automation project hardware types and configuration
- Creation of new S7 automation projects and documentation
- Signal module input and output and internal memory addressing structures
- Downloading and uploading PLC automation projects
- Changing the PLCs operating mode
- Monitoring a PLC online
- PLC diagnostics and fault finding

SPA CORE

Safety Passport Alliance



1
day

£125
+ VAT

This one-day course aims to provide delegates with an overview of the areas of responsibility associated with health, safety and the environment and the implications of hazards and risk assessments on both the individual and the employer and how the actions of the selected parties can reduce incidents occurring.

Course Content

The course will be split to cover the following areas:

- Module 1 – Organising for Safety
- Module 2 – The Workplace
- Module 3 – Tools, Plant and Machinery
- Module 4 – Health
- Module 5 – Procedures
- Module 6 – The Environment

SPA Food and Drink

Safety Passport Alliance



1
day

£125
+ VAT

With
SPA CORE
£200
+ VAT

The SPA Food and Drink course focuses on hygiene and food safety, specific environmental issues and health and safety practices that are associated with personnel working within the food and drink industry.

This one-day course provides specific details around environmental concerns and health and safety associated with this industry and the associated risks that are applicable if these are not met.

These courses assess injury risk rates, the need for training, awareness and good personal behaviour. Plus the implications associated with food, environmental and people damage.

Course Content

The course is split to cover the following areas:

- Module 1 – Food protection
- Module 2 – Environmental protection
- Module 3 – Health and Safety

Please note that this course can only be completed following the successful completion of the SPA CORE training course.

SPA Refresher – Food and Drink

Safety Passport Alliance



Safety Passport Alliance Training provides nationally recognised health and safety training and assurance, which caters for each industry sector, of which Centrica will be offering both the CORE and Food and Drink courses

SPA Refresher

The SPA Passport food and drink refresher training course focuses on hygiene and food safety, specific environmental issues and health and safety practices that are associated with personnel working within the Food and Drink Industry.

This one-day course provides specific details relating the relevant food hygiene, environmental concerns and health and safety associated with this area and the risks that are applicable if these are not met. The course assesses injury incident rates, the need for training, awareness and good personal behaviour. Plus the implications associated with food damage, environmental damage and people damage.

Course Content

The course is split into the following areas:

- Module 1 – Food protection
- Module 2 – Environmental protection
- Module 3 – Health and safety

This module provides an awareness and understanding of the hazards to health and safety.



BCO Introduction to Building Controls and HVAC



1
day

BCIA
members
£220
+ VAT

Non-
members
£300
+ VAT

This course is designed for those who either do not require the full technical detail of the building controls courses (BC1-BC6), or who are new to this area of the industry and require an introductory overview. The course provides full coverage of day to day involvement in building controls and HVAC, but at a level that does not focus on the technical detail.

It is aimed at industry administrators and managers, facilities managers and estates managers, as well as electricians and other building services trades personnel who wish to become more informed in this sphere of work.

Course Content

- What is a control system
- Types of control heating systems
- Primary heating plant
- Distribution of heating
- Basic control of heating
- Hot water service
- Centralised HWS
- Ventilation and air conditioning
- Fresh air, heating & cooling with air systems
- Basic control of air systems
- Relative humidity and the psychometric chart
- Basic humidity control
- Primary air plant
- The air handling unit
- Multi zone system

BC1 Fundamentals of HVAC and Building Technology



2
days

BCIA
members
£390
+ VAT

Non-
members
£550
+ VAT

This two-day assessed course gives an overview of the systems and technologies used in the heating, ventilation and air conditioning industry. This course also covers building controls and building management systems.

It is aimed at those already involved in building controls or the building management industry that need to have a knowledge and understanding of the terminology, technologies and systems used, whether they are managers, designers or installation engineers.

Course Content

- Introduction to building technology and the most important requirements of the building enclosure and building services installation
- Principles of HVAC and the psychometric chart
- Introduction to ventilation and air conditioning
- Introduction to measuring and control technology
- Introduction to fundamental hydraulic circuits
- Refrigeration technology
- End of course assessment

BC2 Measuring and Control Technology



2
days

BCIA
members
£390
+ VAT

Non-
members
£550
+ VAT

This is a two-day course split into two parts. The controls technology element consists of two days' computer-based interactive learning supported by the trainer, along with a day's comprehensive training on the theory of measuring technology.

It is designed for engineers and technicians who have some knowledge and field experience within the industry, most likely with a minimum period of one year. It is also recommended that candidates have completed Fundamentals of HVAC and Building Technology (BC1) first.

Course Content

- Measuring technology and use of measuring equipment
- Fundamentals of measurement
- Measured variables in HVAC
- Transmission action
- The different types of controllers and control loops
- Locating and mounting sensors
- Measuring concept/planning
- Control technology
- The controlled system
- Digital Direct Control (DDC)
- End of course assessment

BC3 Hydraulics in Building Services



2
days

BCIA
members
£390
+ VAT

Non-
members
£550
+ VAT

This course involves the main water circuits and systems used within the building services controls environment and includes the necessary mechanical knowledge needed to understand applications, covering all aspects of valve sizing control.

It is aimed at engineers and technicians who have some knowledge and field experience within the industry, usually with a minimum of one year. It's also recommended that they complete the BC1 Fundamentals of HVAC and Building Technology course first.

Course Content

- Introduction to hydraulic circuits
- Hydraulic characteristics of valves and actuators and sizing controlling elements
- Pressure independent valves
- Variable speed pumps
- Sizing of the controlling elements
- Hydraulic circuit problems
- Valve sizing
- End of course assessment

BC4 Control Function and Heating Plants



2
days

BCIA
members
£390
+ VAT

Non-
members
£550
+ VAT

This course provides a detailed overview of all types of heating plants and systems, together with the associated control applications.

It is an advanced course for engineers and technicians who have a good level of knowledge and experience within the industry. It is recommended the BC1 Fundamentals of HVAC and Building Technology is completed first.

Course Content

- Control of a heating boiler
- Control of a multiplant boiler
- Control and supervision of oil/gas burners
- Control of DHWS heating plant
- Control of heat pump plant
- Control of solar plant
- Introduction to Building Information Modelling (BIM)
- End of course assessment

BC5 Control of Ventilation and Air Conditioning



2
days

BCIA
members
£390
+ VAT

Non-
members
£550
+ VAT

Using psychometric charts and data, this course details the requirements of air conditioning plants and how they can be controlled effectively for resourceful operation and energy efficiency.

It is designed for managers, electricians and engineers who are responsible for the design, installation and commissioning of building control technologies and systems for ventilation and air conditioning. This advanced course builds on the knowledge gained in the BC1, BC2, BC3 and BC4 courses.

Course Content

- AHU component parts including variable speed fans and EC motors
- Factory packaged controls
- Temperature control in ventilation plants
- Humidity control
- Mixing re-circulated air
- Control and frost protection of heat recovery equipment
- Plant concepts for partial air conditioning plants
- Plant concepts for full air conditioning plants with heat recovery
- Various control functions
- Control of air re-treatment
- End of course assessment

BC6 Control of Cooling Systems



2
days

BCIA
members
£390
+ VAT

Non-
members
£550
+ VAT

A detailed, theory-based course relating to refrigeration and psychometrics, focusing on how the refrigeration process operates.

This is an advanced course for engineers and technicians who have a good level of knowledge and experience within the industry. It is recommended the BC1 Fundamentals of HVAC and Building Technology course is completed first before taking this course.

Course Content

- Fundamentals of thermodynamics refrigerants
- The h, log p chart
- Mechanical design of compression refrigeration plant
- The compression refrigeration circuit in the h, log p chart
- Heat pump technology
- The absorption cycle
- Optimising chiller plant

CompEx Ex01 to Ex04



5
days

£795
+ VAT

CompEx is the national training and assessment scheme for electro technical crafts personnel who work in potentially explosive atmospheres, such as on and off-shore Oil and Gas Pharmaceuticals, Energy and Chemical industries.

CompEx is a national joint training initiative developed and implemented by the Engineering Equipment and Material Users Association (EEMUA) and JTL and is supported by the Health and Safety Executive.

JTL, who is the national training agent for the electrical contracting industry, has been appointed to develop, operate and manage the training provision across the UK and has licensed and accredited a number of centres to deliver the training and assessment.

This five-day course aims to deliver competence based training and assessments in the selection, use, maintenance and inspection of electrical apparatus in potentially explosive atmospheres in accordance with the requirements of BS EN 60079 series relevant standards.

On successful completion of the assessments the candidates will be issued with a certificate of core competence by JTL and EEMUA.

Pre-Requisites

Delegates should be a competent Electrician and/or instrument craft personnel. You will be required to bring photographic identification and suitable evidence to prove your competence. This ideally will be certification/letter from your employer or a JIB Gold card.

Course Content

- Area classification
- Gas groups
- Temperature classification
- IP Ratings
- Selection of equipment
- Ignition sources
- Legislation
- Directives and standards
- Earthing and Bonding
- Ex 'i', Ex'd', Ex'e', Ex'p', Ex'm', Ex'n', Ex,'o' and Ex'q'
- Wiring systems and glanding
- Installation, maintenance, inspection and testing
- Feedback and review



CompEx Ex01 to Ex04 (Refresher)



CompEx is the national training and assessment scheme for electro technical crafts personnel who work in potentially explosive atmospheres, such as on and off-shore Oil and Gas Pharmaceuticals, Energy and Chemical industries.

CompEx is a national joint training initiative developed and implemented by the Engineering Equipment and Material Users Association (EEMUA) and JTL and is supported by the Health and Safety Executive.

JTL, who is the national training agent for the Electrical contracting industry, has been appointed to develop, operate and manage the training provision across the UK and has licensed and accredited a number of centres to deliver the training and assessment.

This two-day refresher course aims to deliver competence based training and assessments in the selection, use, maintenance and inspection of electrical apparatus in potentially explosive atmospheres in accordance with the requirements of BS EN 60079 series relevant standards.

On successful completion of the assessments the candidates will be issued with a certificate of core competence by JTL and EEMUA.

Pre-Requisites

Delegates will have completed the five-day CompEx course and held the certificate for no longer than five years. Copies of core electrical competence must be provided to attend this course.

Course Content

- Area classification
- Gas groups
- Temperature classification
- IP Ratings
- Selection of equipment
- Ignition sources
- Legislation
- Directives and standards
- Earthing and Bonding
- Ex 'i', Ex'd', Ex'e', Ex'p', Ex'm', Ex'n', Ex,'o' and Ex'q'
- Wiring systems and glanding
- Installation, maintenance, inspection and testing
- Feedback and review

CompEx ExF Foundation Module



1
day

£250
+ VAT

CompEx is the national training and assessment scheme for electro technical crafts personnel who work in potentially explosive atmospheres, such as on and off-shore Oil and Gas Pharmaceuticals, Energy and Chemical industries.

CompEx is a national joint training initiative developed and implemented by the Engineering Equipment and Material Users Association (EEMUA) and JTL and is supported by the Health and Safety Executive.

JTL who are the national training agent for the Electrical contracting industry has been appointed to develop, operate and manage the training provision across the UK and has licensed and accredited a number of centres to deliver the training and assessment.

On successful completion of this one-day course the candidates will be issued with a certificate of core competence by JTL and EEMUA.

Pre-Requisites

There are no practical assessments within this foundation course, therefore no pre-requisites have been defined.

Course Objectives

On completion of this course, candidates will have:

- A greater understanding of the current directives and regulations relating to hazardous areas
- Awareness of typical flammable atmosphere situations and types of release
- Understanding of the characteristics of gases, vapours and dusts
- Understanding of the basic principles of area classification including zones, apparatus groups and temperature classification
- Understanding of identification for hazardous area equipment
- Awareness of the types of protection for equipment for use in hazardous areas
- Understanding of the IP code for ingress protection
- Awareness of various ignition sources and potential associated hazards



Safe Working Procedures

We help your business create a safe working environment

We provide bespoke safe working practices and procedures to help increase employee awareness of how to work safely with electricity.

We have a wealth of experience in providing organisations with electrical safety rules and procedures. We carry out onsite assessments of working practices to identify regulatory compliance gaps, assess risk and provide a bespoke 'safe system of work' framework for your business to follow.

We identify and minimise risks

Around two thirds of all electrical accidents are caused by inadequate working practices and procedures. The costs associated with regulatory non-compliance and onsite electrical incidents can be:

- Health and Safety Executive (HSE) fines and lawsuits
- Production Downtime
- Business Closure

Safe and compliant businesses operate smoothly and more efficiently, being less susceptible to health and safety incidents that can lead to production downtime, HSE investigation, negative publicity and the temporary or permanent closure of business.

To identify your company's safe working procedure requirements, it is important to ask yourself the following questions:

- Do I know the risks arising from our activities?
- Do I know how to eliminate, control or reduce them?
- How do I communicate the above information effectively to my staff?
- How do I know they are complying with those measures?

By understanding your business needs and your obligations under legislation we can provide a bespoke solution to keep your business compliant. As we self deliver all the services you need, we save you management time and reduce the total cost of service provision.

We remove avoidable costs through a comprehensive range of solutions

We can provide you with all of the relevant documentation applicable to your specific site conditions to allow your people to work safely with electricity. We can undertake required electrical risk assessments or establish a system for key members of staff to complete themselves.

Our safe working procedures:

- Demonstrate safe systems of work to the enforcing authorities (HSE and Environmental Health)
- Satisfy the requirements of insurance company risk management units
- Send a clear signal to managers, employees and contractors that electrical safety is taken seriously
- Can provide a means to defence in criminal and civil courts
- Maintain acceptable work, quality and safety standards
- Help prevent injury and ill-health through safe working practice

Specialist features

We are able to offer the following services, documentation and policies to support safe electrical working on your site:

- Monitor onsite working procedures
- Safe working procedures (site and environment specific)
- Electrical safety policies/rules
- Risk assessment procedures
- Safe isolation procedures
- Sanction to test
- Staff training in procedures and policy

Code of practice for safe working on low voltage electrical systems

The consequence of shock or serious burns from contact with low voltage systems and subsequent dangers from electrically powered machinery may be serious and in some circumstances fatal. Electrical and other relevant personnel must receive training because companies are under a statutory obligation to provide instruction and information to their staff.

The low voltage Code of Practice is specifically designed to give a systematic approach to electrical work through rules and guidance to staff and contractors to prevent death or personal injury from electrical causes in connection with work activities.

We undertake site-based audits to produce reports on an organisation's current status of compliance measured against statutory requirements including the following:

- The Health and Safety at Work Act 1974
- Management of Health and Safety Regulations 1999
- Electricity at Work Regulations 1989
- The Provision and Use of Work Equipment Regulations 1998 (PUWER) and the Workplace (Health, Safety and Welfare) Regulations 1992

If your organisation is heavily reliant upon electrical operations, you must ensure there are procedures and systems in place for continual maintenance.

We keep people safe while saving you money and improving performance

We maintain the safety and integrity of your business with the minimum of disruption to your operation.

Our skilled and committed staff understand your business needs and your obligations under current legislation. We have a rigorous quality assurance process, from initial survey or needs analysis, through to the completion of site work, the delivery of training courses and the ultimate issue of documentation to our clients.

For more information,
or to book your course
please contact:
0800 980 8150



