

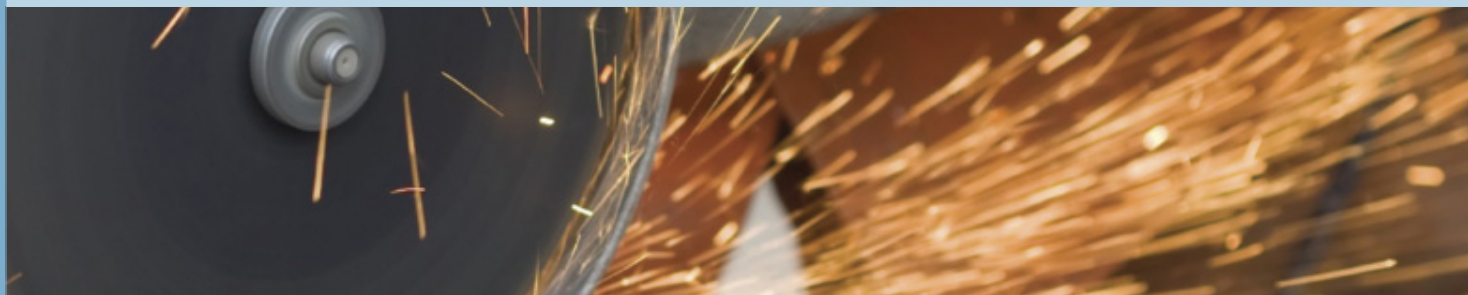
Civil Engineering



020 8619 0939
www.skillstrainingcentre.co.uk



Civil Engineering Courses



| STC CIVIL ENGINEERING COURSES | DURATION | LEVEL | PAGES |
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| Abrasive Wheels | 1 Day | Basic | 04 |
| Administration of NRASW | 1-2 Days | Intermediate | 04 |
| Cable Location Equipment (Use of) | 1 Day | Basic | 05 |
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| Deep Excavations – Trenches and Shafts | 1-3 Days | Intermediate | 06 |
| Driver CPC | 1-5 Days | Basic | 06 |
| Health & Safety Awareness | 1 Day | Basic | 07 |
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| Manual Handling | 1 Day | Basic | 07 |
| Mason Improvers | 5-15 Days | Intermediate | 08 |
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| Plant | 1-7 days | Basic | 08 |
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| Risk Assessments & Method Statements | 1 Day | Basic | 09 |
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| Setting Out | 2-3 Days | Intermediate | 11 |
| Signing, Lighting & Guarding | 1 Day | Basic | 11 |
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| Working at Heights | ½-3 Days | Basic/ Intermediate | 11 |
| Working in the vicinity of DNO/IDNO equipment including G39 | 1 Day | Intermediate | 12 |

INTRODUCTION

STC provide a wide range of Civil Engineering and related training programmes to help develop the skills of your staff and meet your many Health & Safety and other contract requirements.

The law requires that employers provide whatever information, instruction and training is needed to ensure, so far as is reasonably practicable, the health and safety of employees.

Over 200 people are killed each year in accidents at work and over one million people are injured. Over two million suffer illnesses caused by, or made worse by, their work.

CORPORATE MANSLAUGHTER

The first trial to be brought under the Corporate Manslaughter and Corporate Homicide Act 2007 will open in Bristol Crown Court on February 23 2010 and is expected to last six weeks. The case against Cotswold Geotechnical Holdings follows the death of one of its employees, Alexander Wright, a geologist, who was killed in September 2008, when a trench where he had been taking soil samples collapsed.

Peter Eaton, a director of the company, has been charged with gross negligence, manslaughter and for a breach of Section 37 of the Health and Safety at Work etc. Act 1974 ('HSWA'). S.37 of HSWA provides for the prosecution of a senior office holder of the company if it can be shown that the offence against the company was committed with the consent or connivance of, or following any negligent act of, such a person.

STAFF DEVELOPMENT

As well as helping you to meet legislative requirements, STC can also provide tailored training to improve the skills of your existing workforce, making them more versatile and/or improving the speed/quality of the work they are able to produce. Please ask for further details about what may be possible e.g. Masons Improvers Course.

TRAINING & ON-SITE ASSESSMENTS

STC is committed to working as flexibly as possible with its clients to meet individual training requirements. Training only, on-site assessments, shorter duration, tailored, and weekend courses can all be arranged if required.

POWER & LOLER

The Provision and Use of Work Equipment Regulations (PUWER) require risks to people's health and safety, from equipment that they use at work, to be prevented or controlled. In addition to the requirements of PUWER, lifting equipment is also subject to the requirements of the Lifting Operations and Lifting Equipment Regulations (LOLER).

You need to **ensure** that people using work equipment have received **adequate training, instruction and information** for all equipment they are being asked to use.

In general terms, the Regulations require that equipment provided for use at work is:

- ▶ suitable for the intended use;
- ▶ safe for use, maintained in a safe condition and, in certain circumstances, inspected to ensure this remains the case;
- ▶ used only by people who have received **adequate information, instruction and training**; and
- ▶ accompanied by suitable safety measures, e.g. protective devices, markings, warnings.



ABRASIVE WHEELS : 1 DAY

WHO SHOULD ATTEND

All those required to use an Abrasive Wheel as part of their job.

COURSE CONTENT

- ▶ Health & Safety at work
- ▶ Employer duties & Employee duties
- ▶ COSHH
- ▶ Noise
- ▶ PPE/PUWER
- ▶ Use of Equipment - Controls, stop, start and safe use
- ▶ Operator Maintenance
- ▶ Changing of Abrasive Wheels
- ▶ Abrasive Wheel – Physical checks, storage, handling, guards, arbor diameters, types and speeds

PRACTICAL

- ▶ Mount & de-mount an Abrasive Wheel
- ▶ Start and stop the Abrasive Wheel
- ▶ Practical use of the Abrasive Wheel



ADMINISTRATION OF STREETWORKS : 1-2 DAYS

WHO SHOULD ATTEND

All those involved in the administration of Streetworks activities. Street Works Administration Staff, Works Supervisors, Works Planners, Service Providers and Contracting Agents, Design Engineers and Technicians.

COURSE CONTENT

- ▶ Legal requirements and codes of practice relating to the reinstatement of openings in highways
- ▶ Categories of activities
- ▶ Functions of the notice system
- ▶ Categories of activities in relation to minimum notice periods
- ▶ Principles of 3 month, 10 day, 3 day & 2 hour notices
- ▶ Requirements for cancelling/abandoning activities
- ▶ Procedures for closing notices and registering reinstatements
- ▶ Principles of sample and defect inspections
- ▶ Requirement of Section 74 of the NRASW Act 1991 (2006 Revision)
- ▶ Types of road categories
- ▶ High amenity footways and cycle tracks
- ▶ Major features of flexible, rigid, modular and composite roads
- ▶ Categories of streets subject to special control
- ▶ Requirements relating to protected streets
- ▶ Requirements relating to streets with special engineering difficulties
- ▶ Requirements relating to traffic sensitive streets
- ▶ Types of streetwork notice as provided for under the Act
- ▶ Requirements of Sections 56, 58, and 66 of the NRASW Act 1991

USE OF CABLE LOCATION EQUIPMENT : 1 DAY

WHO SHOULD ATTEND

For all staff who need to accurately locate underground services.

COURSE CONTENT

- ▶ Introduction
- ▶ Cable locators and signal generators
- ▶ How to locate services underground
- ▶ Practical use of equipment
- ▶ Interpreting utility plans

CDM AWARENESS : 1 DAY

WHO SHOULD ATTEND

Anyone involved in Construction projects. The course is particularly targeted at Clients, Designers and Contractors.

COURSE CONTENT

- ▶ To provide an introduction to the various duties under CDM2015
- ▶ Client Duties
- ▶ CDM Co-ordinator Duties
- ▶ Designer Duties
- ▶ Principal Contractor Duties
- ▶ Contractor Duties

CONFINED SPACES : 1-3 DAYS

[see our Confined Spaces Brochure for full details]

We have a purpose built Confined Spaces facility and are able to provide a range of Confined Spaces Training including: Awareness & Risk Assessment; Safe Entry & Escape BA; Full Breathing Apparatus; and use of Oxygen Resuscitation Equipment.



DEEP EXCAVATIONS – TRENCHES & SHAFTS : 1-3 DAYS

WHO SHOULD ATTEND

All those who are required to carry out and/or monitor deep excavations in Trenches or Shafts.

COURSE CONTENT

- ▶ Types of Ground
- ▶ Health and Safety Executive - Safety in Excavations
- ▶ Safe trenching techniques
- ▶ Causes of Collapse
- ▶ Types of support systems available
- ▶ Excavation and supporting Trenches & Shafts
- ▶ Shoring with required support system(s)
- ▶ Inspections including dealing with ground water
- ▶ Withdrawing and backfilling safely from Trenches & Shafts

COURSE REQUIREMENTS

- ▶ A suitable site and all the plant and equipment must be available on site before excavation commences.
- ▶ The supervisors will carry out monitoring and inspection.
- ▶ Operatives will be required to carry out the excavation and support under the supervision of the instructor on site.

DRIVER CPC : 1-5 DAYS

(see our Driver CPC Brochure for full details)

Driver CPC is short for “Driver Certificate of Professional Competence”. It is a new qualification that all professional bus; coach; lorry; and Van drivers (over 3.5 ton) will need

to have if they want to drive for a living. Periodic training

is about ensuring drivers have the specific skills and knowledge that they need for their job and expands their training in the industry they work in.

All drivers, new and existing, will have to undertake 35 hours of training every five years, to ensure that their driver CPC qualification remains valid. This is known as periodic training. STC can provide a range of in-house and scheduled courses for Driver CPC.



HEALTH & SAFETY AWARENESS : 1 DAY

WHO SHOULD ATTEND

All those who require a general awareness of Health & Safety legislation and the responsibilities placed on employers and employees.

COURSE CONTENT

- ▶ Health and safety at work Legislation
- ▶ Accident reporting and emergency procedure
- ▶ Accident prevention
- ▶ Health and hygiene
- ▶ Manual handling
- ▶ Working at heights
- ▶ Working with electricity
- ▶ Use of hand held equipment and tools
- ▶ Personal protective equipment
- ▶ Safe use of vehicles
- ▶ Noise and vibration
- ▶ Fire prevention
- ▶ Confined spaces
- ▶ The control of substances hazardous to health
- ▶ First Aid

HIGHWAY INSPECTION : 3-5 DAYS

(see our Highway Inspection Brochure for full details)

We offer a range of specialised training and unique assessment packages, specifically designed to assist organisations in meeting local and national standards and a range of enforcement requirements.

The programmes we provide include: Highway Inspection – Technical; Highway Inspection – Legal; City & Guilds 6033 for Highway Safety Inspections.

MANUAL HANDLING : 1 DAY

WHO SHOULD ATTEND

All those who may be required to lift or move objects in the course of their work.

COURSE CONTENT

- ▶ Health and safety at work Legislation
- ▶ Accident reporting and emergency procedure
- ▶ Accident prevention
- ▶ Health and hygiene
- ▶ Manual handling
- ▶ Working at heights
- ▶ Working with electricity
- ▶ Use of hand held equipment and tools
- ▶ Personal protective equipment
- ▶ Safe use of vehicles
- ▶ Noise and vibration
- ▶ Fire prevention
- ▶ Confined spaces
- ▶ The control of substances hazardous to health
- ▶ First Aid



MASON IMPROVERS : 5-15 DAYS

WHO SHOULD ATTEND

All staff intending to become Mason Paviers and those needing to improve their knowledge/skills as a Mason Pavior.

COURSE CONTENT

- ▶ Theory on methods of all types of setting out for kerb laying.
- ▶ Paving and block laying – emphasising the need for accuracy.
- ▶ Introduction to setting out equipment.
- ▶ Terminology
- ▶ Practical setting out exercises for kerb laying and channels.
- ▶ Individual exercises on setting out for paved areas.
- ▶ Theory on laying and cutting paving-blocks and setting covers in footways
- ▶ Practical exercises on laying & cutting paved areas
- ▶ Practical exercises on laying & cutting block paved areas
- ▶ Individual exercises on paved areas
- ▶ Individual exercises on block paved areas
- ▶ Theory on laying methods for kerbs, dry bed method, wet bed method, radii etc
- ▶ Practical exercise on laying straight runs for kerbs, and channels and radii
- ▶ Practical exercise on using/laying granite kerbs, edge kerb and flat kerb
- ▶ Individual exercises on laying pre-cast kerbs/channels

NRASW : 1-5 DAYS

(see our NRASW Brochure for full details)

We have a purpose built New Roads & Street Works facility and can provide the full range of Operative and Supervisor courses. Successful candidates receive City & Guilds 6156 Certificates and a SCOTVEC Licence depending on the units achieved. Standard courses cover Units 221 – 226 & 229 for Operatives and Units 221 & 230 – 234 for Supervisors.

PLANT : 1-7 DAYS

(see our Plant Brochure for full details)

We offer a full range of Plant Training and Assessment mainly via the Equipment Operators Registration scheme (EORS), other schemes e.g. CPCS are available on request. EORS focuses on a candidate's ability to safely operate different categories of plant and equipment and is designed to provide a flexible way for plant operators to have their ability confirmed via a Health & Safety test and a practical assessment involving the safe use of the relevant plant and machinery. The training and assessments are carried out by our experienced qualified Assessors.

The Equipment Operators Registration Scheme is recognised by the Highways Agency and Local Authorities. You are however, advised to check that an EORS Licence is acceptable to your client before booking any training and/or assessments. The scheme is aimed at those who are using plant on a regularly or adhoc basis, who are working for Local Authorities; Local Authority Contractors; Highway Contractors; Highways Agency or other similar organisations.

REVERSING VEHICLES (BANKSMAN) : ½ DAY

WHO SHOULD ATTEND

All those required to act as a banksman for site vehicles.

COURSE CONTENT

- ▶ Site Planning
- ▶ Signaller
- ▶ On-site signals to be used
- ▶ Positioning
- ▶ Visibility
- ▶ Communication
- ▶ PPE
 - Approved boots
 - Hard hat
 - Safety glasses
 - Reflective fluorescent (Hi-Vis) vest or jacket.
- ▶ Workers on Foot
- ▶ Drivers and Operators
- ▶ Traffic Control Devices, Access/Egress
- ▶ Timing of Work



RISK ASSESSMENT & METHOD STATEMENTS : 1 DAY

WHO SHOULD ATTEND

All staff who are required to carry out Risk Assessments & Method Statements.

COURSE CONTENT

- ▶ Legislation
 - Management of Health & Safety at Work Regulations
 - The Manual Handling Operations Regulations
 - The Provision & Use of Work Equipment Regulations
 - The Health & Safety (Display Screen Equipment) Regulations
 - The Noise at Work Regulations
 - The Control of Substances Hazardous to Health Regulations
- ▶ Risk Assessment
 - Introduction
 - Who should carry out Risk Assessments & Method Statements
 - Definitions
 - Action List
 - Competent Personnel
 - Five Steps to Risk Assessment
 - Record & Communicate Results
 - Review
- ▶ Example Risk Assessment Policy
- ▶ Risk Assessment & Method Statement Exercises

HIGHWAYS SECTOR SCHEME 12D : VARIOUS

[see our 12D Brochure for full details]

WHAT IS THE LANTRA HIGHWAYS SECTOR SCHEME?

National Highways Sector Schemes are quality management schemes designed to ensure that the installation of traffic management is undertaken to industry and nationally recognised standards. As part of this process, it ensures you have a properly trained and competent workforce.

They specify the training and assessment operatives must have to ensure they can work safely and to the highest standard in traffic management, and:

- ▶ Provide clear safe working practices and procedures
- ▶ Provide an industry benchmark
- ▶ Provide a basis for continuous improvement
- ▶ Focus on quality

Sector Schemes are developed within an ISO 9001:2000 framework in partnership with key organisations in the highways industry.

WHO IS THE TRAINING SUITABLE FOR?

The scheme provides training for, and assessment of, competence required to work on or near rural or urban roads. This can include construction workers, fence installers, traffic management operatives, and highway inspectors. It is the employer's responsibility to ensure the competency of their employees and that their skills and knowledge are maintained.

WHY IS SECTOR SCHEME TRAINING NEEDED?

It is intended that highway authorities that use the Specification for Highway Works (SHW) as the basic document for procuring highways work will require compliance with ISO 9001:2008 and the Sector Scheme 12D Document. It is recommended that other Highway Authorities should adopt the scheme as a standard requirement.

COURSES AVAILABLE

| Scheme Training Unit (Assessment Module) | Unit Name | Number of Days for Training & Assessment |
|--|---|---|
| T1(M1) | Registered Moving Works Operative (MWO) | T1 (M1) - ½ Day Training & Assessment |
| T1 (M1) + T2 (M2) | Static Works on Single Carriageways including all forms of Traffic Control (except multi-phase traffic signals) | T1 (M1) - ½ Day Training & Assessment T2 - ½ Day Training (M2) - Min. 1 day centre based + Min. 2 days on-site assessments |
| T3 (M3) | Static works traffic management on dual carriageways restricted to 40mph or less | T3 – 1 Day Training (M3) – Min. 3 days on-site assessments |
| T4 (M4) | Convoy Working | T4 – 1 Day Training (M4) – Min. 1 Day on-site Assessments |
| T5 (M5) | Multi-phase Traffic Signals | T5 – 1 Day Training (M5) – Min. 1 Day on-site Assessments |
| T6 (M6) | Registered Lead Traffic Management Operative | T6 (M6) – 2 Days (including assessments) |
| T7 (M7) | Managers & Client Officers | T7 (M7) – 2 Days (including assessments) |

SETTING OUT : 2-3 DAYS

WHO SHOULD ATTEND

- ▶ Staff who are required to undertake simple survey work and set-out work profiles from the information gathered.
- ▶ Staff who set-out profiles from information supplied from plans and drawings or other technical staff.
- ▶ Staff who wish to progress towards NVQ levels 2 or 3 accreditation.

COURSE CONTENT

- ▶ Determining technical information for levelling & setting out
- ▶ Performing highway related levelling & setting out tasks
- ▶ Solving & designing simple profiles
- ▶ Utilising information, equipment and data applicable to general highway operations

Training will include short module sessions and be divided between classroom and simulated site exercises. Theoretical and practical demonstrations are designed to show candidates the methods & techniques used and facilitate candidate performance.

SIGNING, LIGHTING & GUARDING : 1 DAY

WHO SHOULD ATTEND

For those staff engaged in the actual signing of Sites & Roadworks.

COURSE CONTENT

- ▶ Introduction
- ▶ The legal requirements
- ▶ Safety at Street Works and Road Works – A Code of Practice
- ▶ Basic Layouts (Theory)
- ▶ Layouts of sites including selection of signs and equipment
- ▶ Layouts for temporary footways
- ▶ Removals of signs and opening of footways and carriageways
- ▶ Risk Assessment

WINTER SERVICE : 2-3 DAYS

(see our Winter Service Brochure for full details)

In relation to required competence levels, the Institute of Civil Engineers Design and Practice Guide recommends that all drivers salting or ploughing on roads must be trained and successfully assessed in accordance with the City & Guilds qualification standards.

The Skills Training Centre offers a comprehensive range of training and assessment for the City & Guilds 6159: Winter Service Operations qualification. Our experienced trainers/assessors put staff at ease and ensure they have sufficient knowledge to enable them to operate safely and effectively. We can also provide training and assessment for Winter Service operational supervisors.



WORKING AT HEIGHTS : ½-3 DAYS

(see our Working at Heights Brochure for full details)

We are able to provide a range of working at heights courses from basic awareness through to full rescue training.

WORKING IN THE VICINITY OF DNO/IDNO EQUIPMENT INCLUDING G39 : 1 DAY

WHO SHOULD ATTEND

All those involved in work requiring access to powered street furniture or highways equipment.

AIM

This course aims to provide employees working within the Highway Electrical Sector with the appropriate safety knowledge and practical key skills required for work in the vicinity of DNO equipment. This includes overhead power lines and the removal and replacement of DNO cut-out fuse carriers in a safe and responsible manner and to comply with the responsibilities under organisation and legislative policies.

PREREQUISITES

There are a number of prerequisites which candidates must satisfy before attending. In order to gain maximum benefit and learning outcomes from this course, employers will need to complete a Suitability Form to confirm that their delegates have an appropriate level of knowledge or experience of the following topics and that they are confident that staff can work safely or have attended the relevant HESA Training Modules:

- ▶ Health, Safety and Environment at Work
- ▶ Control of Substances Hazardous to Health (COSHH)
- ▶ Electrical Safety
- ▶ Moving and Handling
- ▶ Interpretation of Legislation & Standards
- ▶ Emergency Preparedness
- ▶ Hazards and Risk Assessment
- ▶ Safe Isolation Procedures

WHAT TO DO NEXT

If you would like to discuss your organisation's Civil Engineering training requirements, please contact our office and we will be happy to assist you in putting together a programme that is relevant to your staff and the activities they are required to undertake

COURSE OBJECTIVES

On completion of the course learners will:

- ▶ State the associated Hazards and Risks
- ▶ State the acceptable clearances between lighting columns and overhead lines
- ▶ State the different methods of providing a mains supply
- ▶ Describe their responsibilities regarding commissioning, maintenance, repair and emergency attention
- ▶ State the method of work to be adopted when working in the vicinity of live conductors
- ▶ List the PPE requirements
- ▶ Demonstrate the ability to correctly remove and replace a cut-out fuse carrier for isolation purposes and fuse replacement
- ▶ Carry out a polarity check

COURSE TOPICS

- ▶ Electrical Injuries
- ▶ Overview of EREC G39 Issue 2 2013
- ▶ Overview of ILP HV OHL Supplement to the ILP CoP for Electrical Safety in Highway Electrical Operations
- ▶ PPE
- ▶ Statutory requirements
- ▶ Means of providing electricity supplies
- ▶ Commissioning, Maintenance, Repair and Emergency Attention including supply cable insulation shrinkage
- ▶ Cut-out fuse carrier removal and replacement procedures

ASSESSMENT

There is a multi-choice test paper and individual practical assessment upon conclusion of this course.