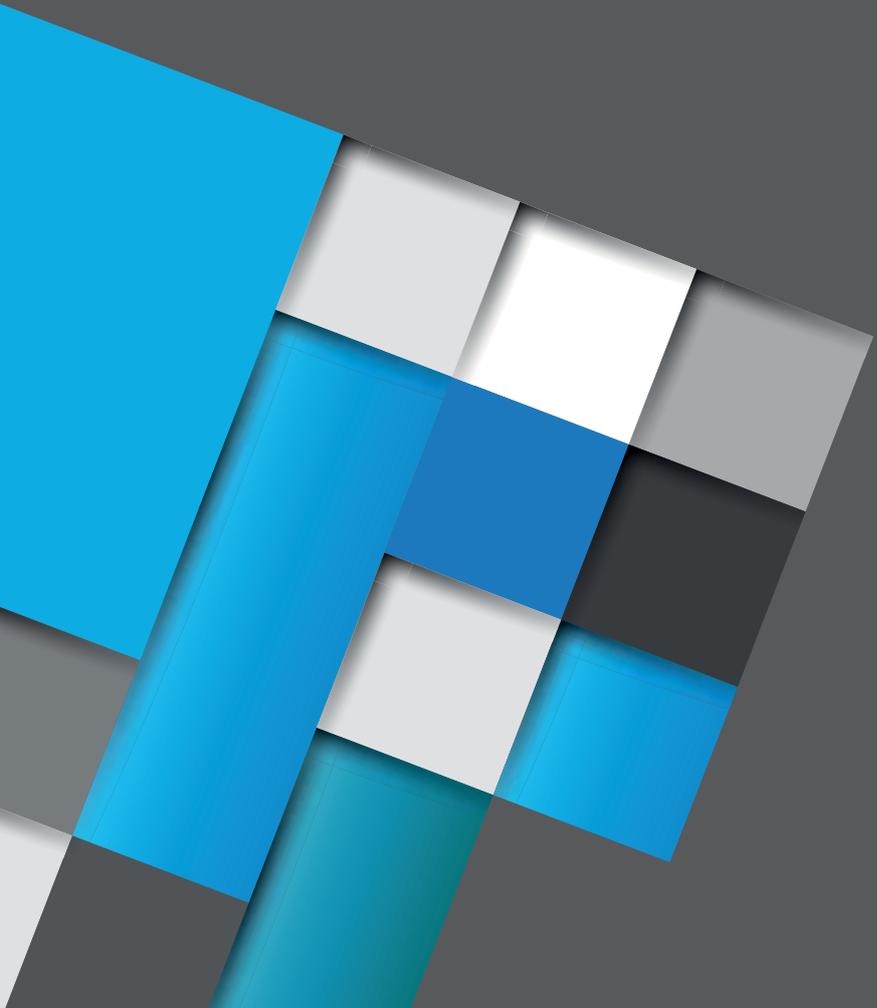


engineering

2014/15



always the

right course

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# Engineering

## Welcome to Engineering at Edinburgh College

Here at Edinburgh College, we're at the forefront of modern engineering. We're able to offer an exciting range of courses which are designed to respond to the needs of the industry. Whether you're looking to develop a career in mechanical engineering, heating and ventilation, fabrication and welding, manufacturing engineering, measurement and control, or petroleum engineering, you'll find the right course for you here. We offer training at a variety of levels to suit you, from Entry Level to HND. We also offer clear progression routes, partnering with some of Scotland's leading Universities to provide access to degree-level studies.

To prepare you for your future career, you'll experience real-life working environments using the latest technologies. We're particularly proud of the innovative facilities available at the College, ensuring your training is relevant to the industry of today. In partnership with energy company SSE, we've successfully launched Scotland's first Solar Meadow - a five-acre site, including over 2,500 solar panels. It's the first teaching project of its kind

in Scotland, acting as both a research centre and outdoor classroom. This is the perfect place to develop key skills which are increasingly sought after in Scotland's expanding renewable energy sector. In addition, the Solar Meadow is forward-thinking, as a way for us to rely much less on traditional forms of energy at our Midlothian Campus. Also at our Midlothian Campus, the MacTaggart Scott Hydraulics, Pneumatics and PLC Laboratory was opened in 2013. Through our partnership with MacTaggart Scott, the laboratory represents a major investment over five years. This is the ideal place to train as a MacTaggart Scott apprentice, primarily in engineering roles which support the Naval Defence and Marine industries. In addition, the new laboratory provides hydraulic and pneumatic equipment, allowing us to offer engineering training in these specialist areas.

We recognise that the oil and gas industry is, and will continue to be, one of the key drivers of Scotland's economy. To prepare you for this multi-million pound industry, we provide a state-of-the-art Oil Production Platform Simulator. This realistic

training environment will prove essential in your future role. Having trained thousands of apprentices for the oil and gas industry, Edinburgh College is truly a specialist in this field. In fact, we're one of only three approved training centres for OPITO in the UK - the oil and gas industry's focal point for skills learning and workforce development. In 2012 an Edinburgh College apprentice was named OPITO's overall Apprentice of the Year - the fourth year running that this accolade has gone to the College.

Now you've seen how dedicated we are to providing award-winning, up-to-date engineering training, the following guide will help you choose the course that's right for you.



## Engineering Craft Skills

Campus: Midlothian  
Mode of Attendance: Short Full-Time

### What is this course about?

This course will give you the broad practical skills base you'll need in engineering manufacture and processes. You'll develop the skills and knowledge necessary for basic engineering processes and maintenance, working on a range of engineering systems, including fitting using hand skills, fabrication and welding, practical electronics and much more.

### How do I get a place?

Minimum 2 passes at SCQF Level 4 preferred

### What will I learn?

- Engineering materials
- Repair and maintenance
- Fitting using hand skills
- Employability skills

### What can I do next?

- NC Access to Engineering or Engineering Systems
- Progression routes onto an SVQ2 course or a Modern Apprenticeship in Engineering

## Pre Access to Engineering

Campus: Midlothian  
Mode of Attendance: Full-Time

### What is this course about?

You will develop your knowledge and understanding of engineering principles and systems covering a range of manufacturing engineering disciplines. In addition, there will be workshop project time which will allow you to develop your practical skills. You will also have the opportunity to study additional units to allow progression into further FE courses.

### How do I get a place?

- Mathematics at a minimum of Standard Grade Level 3 having studied at General/Credit Level
- If you haven't studied Maths for some time then you might benefit from taking a Core Maths unit before joining the course
- English at Standard Grade Level 4 would be an advantage

### What will I learn?

- Mechanical engineering and electrical principles
- Engineering materials
- Pneumatics and hydraulics
- Graphical communications
- Safety
- Engineering project

### What can I do next?

Successful completion of the course provides the entry qualification to either an Engineering Access to University or HNC Engineering discipline. Most students who study the HNC progress to degree study in an engineering discipline.

## SWAP Access to Engineering

Campus: Midlothian  
Mode of Attendance: Full-Time

### What is this course about?

This course is designed to develop your knowledge and understanding of engineering principles and systems, covering a range of engineering disciplines. It's your perfect stepping stone to study a variety of engineering disciplines at HNC Level.

The course is based on a Mechanical Engineering code and can lead you to a higher NC group award qualification. There are additional units such as electrical principles and engineering systems which can broaden the programme, enabling you to progress to a wide range of different engineering disciplines upon completion of the course.

For more information on Scottish Wider Access Programme (SWAP) courses, please go to <http://www.scottishwideraccess.org/> and click on the SWAP East Portal.

### How do I get a place?

- Maths and Physics at a minimum of Standard Grade Level 2 having studied at Credit Level, or equivalent
- If you haven't studied Maths or Physics for some time then you might benefit from taking a preparatory unit before joining the course
- English at Standard Grade Level 3 would be an advantage

- You'll also sit an entrance test which covers numeracy, literacy and comprehension
- If you have been out of full-time education for 3 years or more, this course is particularly suited to you as you can register with SWAP and receive additional support with your application and progression to university
- Adult returners without the maths and physics qualifications required are welcome to apply. You will need to offer alternative qualifications or prove a real desire to be on the course
- Places on the course are very competitive and fill up quickly so if you are interested please apply as soon as possible to ensure you can be considered for a place

### What will I learn?

You'll gain knowledge and understanding of engineering principles and systems covering a range of engineering disciplines. The subjects are studied at SCQF Level 6 and include:

- Engineering Dynamics
- Thermofluids
- Maths
- Communications
- Information Technology
- Energy
- Electrical Principles

- Engineering Design
- Statics
- Strength of Materials
- CAD
- Preparation for Higher Education

### What can I do next?

- Study at HNC Level in a variety of engineering disciplines, after which you'll be able to progress to second year degree study
- Access to a first year degree in mechanical, electrical, renewable and civil/structural engineering at university
- You can study a range of new engineering courses at HNC/D and Associate Degree level and students completing the SWAP Access to Engineering course are eligible to apply for these courses if they would prefer to continue their learning with Edinburgh College

## Welding Processes

Campus: Midlothian

Mode of Attendance: Evening

### What is this course about?

This course introduces the following welding processes; MMA, MIG, Oxy -Acetylene and TIG. Candidates can then complete a SQA unit in their preferred process.

### How do I get a place?

Contact Claire Wilson on 0131 344 7153.

### What will I learn?

The safe setting and use of welding processes.

### What can I do next?

SQA qualifications at NC level in other process.

## NJIC Competency Test

Campus: Midlothian

Mode of Attendance: One Day Course

### What is this course about?

This is a commercial activity: weld testing in accordance with BESCA HVCA TR5 Code of Practice.

### How do I get a place?

For apprentices and operatives employed in heating and ventilation, building services engineering or allied industries.

### What will I learn?

- This is a weld test competency course where you will prove that your welds are fit for purpose
- A certificate is awarded that will last for 3 years

### What can I do next?

A certificate is awarded that will last for 3 years, and after this time another retest is required to update skills

## NC Access to Engineering Systems

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

Edinburgh College offer Access to Higher Education courses. These are ideal if you've been out of full-time education for 3 years or more, or may have left school with few or no qualifications.

On this course, you'll develop your knowledge and understanding of engineering principles and systems covering a range of engineering disciplines. It will prepare you for Higher National or University degree study.

### How do I get a place?

- Minimum 2 passes at SCQF Level 4
- Entrance test and interview

### What will I learn?

- Engineering Principles and Systems
- Engineering Fundamental Principles
- Mechanical and Electrical Disciplines

### What can I do next?

- NC Access to Engineering or Engineering Systems
- Progression routes onto an SVQ2 course or a Modern Apprenticeship in Engineering

## NC Manufacturing Engineering

Campus: Midlothian

Mode of Attendance: Part-Time

### What is this course about?

This course is perfect to develop your knowledge and understanding of engineering principles and systems. You'll cover a wide range of manufacturing engineering disciplines essential to your future studies and career.

You'll take part in workshop designed to develop your practical skills. You'll also have the opportunity to study for a Level 2 SVQ in Performing Engineering Operations.

The course will prepare you for progression onto HNC Engineering Systems, making it the perfect stepping stone on your path to university and employment in engineering.

### How do I get a place?

- Maths at a minimum of Standard Grade Level 3 having studied at General/Credit Level
- If you have not studied Maths for some time then you might benefit from taking a Core Maths unit before joining the course
- English at Standard Grade Level 4 would be an advantage

### What will I learn?

- Practical manufacturing engineering skills
- Level 2 SVQ in Performing Engineering Operations

### What can I do next?

HNC Engineering Systems, then progress to degree study in an engineering discipline





## NC Engineering Practice

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

This is the perfect course to give you the broad practical skills base you'll need in engineering manufacture and maintenance.

You'll take part in classroom and workshop practice to give you both the theory and practical experience you need. The course is ideal if you're looking to gain qualifications in fundamental areas of practical engineering, and it's aligned to SVQ Level 2 Modern Apprenticeship requirements.

### How do I get a place?

Minimum 2 passes at SCQF Level 4

### What will I learn?

- Practical skills in engineering manufacture and maintenance
- Mechanical and electrical principles
- Assembly skills
- Workshop skills

### What can I do next?

Apprenticeship posts in Engineering Maintenance or Engineering Manufacture with local engineering companies

## NC Engineering Systems with Skills for Work (Energy)

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

This award aims to develop your abilities to apply analysis and synthesis skills to the solution of engineering problems. You'll learn to break down full engineering systems into component areas in order to examine how they function and contribute to the full system.

This HNC qualification will allow you to seek employment in a wide range of industrial, service, public and renewable energy sector organisations. Market research indicates that HNC and HND Engineering awards are still regarded as the minimum qualifications required by many organisations to work at engineering technician level.

By completing the HNC you'll give yourself an excellent opportunity of gaining a place on HND and degree-level Mechanical, Electrical, Electronic and Renewable Energy courses. The course is therefore a fantastic starting platform.

### How do I get a place?

- Maths at a minimum of Standard Grade Level 2 having studied at Credit Level
- If you've not studied Maths for some time then you might benefit from taking a Core Maths unit before joining the course
- English at Standard Grade Level 3 would be an advantage
- You'll also need to sit an entrance test

### What will I learn?

- Engineering Principles and Systems
- Practical Skills
- Engineering Units at Higher level

### What can I do next?

- Entry requirements for HNC Engineering Systems
- Application for HNC Mechanical Engineering dependent on previous skills and experience.





## HNC Measurement and Control Engineering

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

This course will give you the knowledge, analytical and practical skills you need to work as a technician in the oil, gas, chemical, food, drinks, paper and energy production and processing industries.

You'll cover Process Control, Distributed Control Systems, Measurement Systems, Complex Control Systems, Programmable Logic Controllers, Mathematics for Engineering and much more - all the areas you need to gain employment as an instrument technician, as well as qualifying you to access further study.

### How do I get a place?

- You'll need an NC Engineering Systems in order to qualify for a place on the course
- We'll also consider your application if you have relevant industrial experience

### What will I learn?

- Process Control
- Distributed Control Systems
- Measurement Systems
- Complex Control Systems
- Programmable Logic Controllers
- Mathematics for Engineering

### What can I do next?

- Work as an instrument technician in industry
- Direct entry to the second or third year BEng (Hons) degree in Instrumentation & Control Engineering at Teesside University

## HNC Petroleum Engineering

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

This course aims to give you the necessary knowledge, understanding and analytical skills you need for employment as a technician or technician engineer in the petroleum industry.

Typically, you can expect to be studying a range of theories - from Principles of Engineering Systems to Chemical Disciplines. You'll be well prepared to progress to degree-level studies in engineering, or to apply for employment in the oil and gas industry.

### How do I get a place?

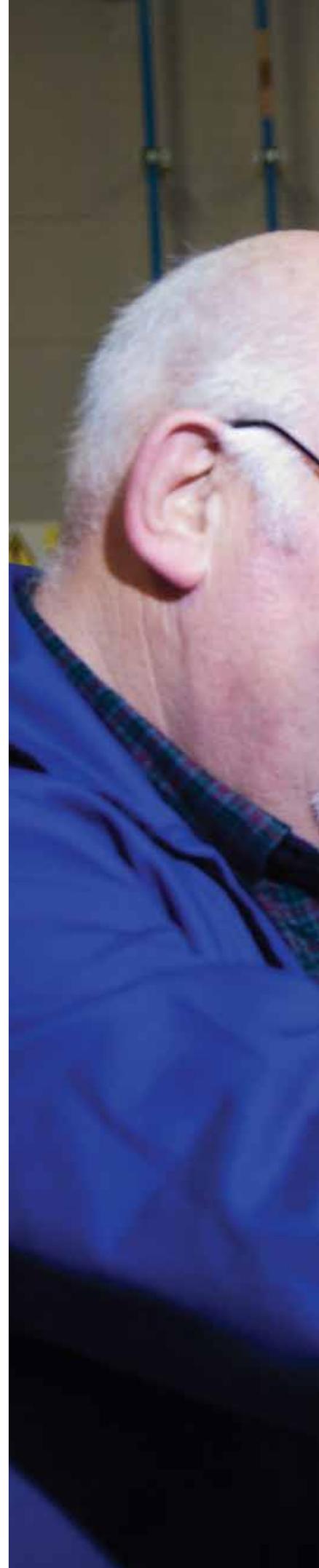
NC in Engineering, or an NC in Multi Discipline Engineering, or one Higher pass to qualify for full time study

### What will I learn?

- Principles of Engineering Systems
- Oil Extraction
- Chemical Disciplines
- Dynamics
- Machines
- Renewable Energy Units

### What can I do next?

- Progress to the second year of an HND course or the first or second year of a degree course
- Employment in the oil and gas industry
- Successful completion may allow transfer onto a related HND Engineering course





## HND Engineering Systems

Campus: Midlothian  
Mode of Attendance: Day Release

### What is this course about?

This course will give you the knowledge and analytical skills needed for employment as a technician engineer. You'll study a range of subjects from a variety of engineering disciplines, and will also cover engineering systems, design, project management, manufacturing and mathematics for engineering - all essential areas for both your promotional prospects and further study in engineering.

### How do I get a place?

- You'll already be employed in an engineering environment
- National Certificate Level in an engineering discipline

### What will I learn?

- Subjects from a variety of engineering disciplines
- Engineering systems
- Design
- Project Management
- Manufacturing
- Mathematics for Engineering

### What can I do next?

- Progress to undergraduate courses with the HND giving direct entry at second or third year
- Improved promotion prospects in either a technical or management role

## HND Engineering Systems (with Renewable Energies)

Campus: Midlothian  
Mode of Attendance: Full-Time

### What is this course about?

If you're planning for employment as a technician or technician engineer, this course is ideal. It will give you the necessary knowledge, understanding and analytical skills needed for a role related to engineering systems.

You'll cover a whole range of essential areas, including studying Principles of Engineering Systems, Pneumatics and Hydraulics, Statics and Strength of Materials, Dynamics and Renewable Energy Units. You'll be ready for the HND course and further degree-level study, as well as direct employment.

### How do I get a place?

- You'll need to have an NC in Engineering or Engineering Practice or an NC in Multi Discipline Engineering
- You'll need one Higher pass to qualify for full time study

### What will I learn?

- Principles of Engineering Systems
- Pneumatics and Hydraulics
- Statics and Strength of Materials
- Dynamics and Renewable Energy Units

### What can I do next?

- Progress to the second year of an HND course or the first or second year of a degree course
- Employment in the industry

## HND Mechanical Engineering

Campus: Midlothian  
Mode of Attendance: Full-Time

### What is this course about?

This course will give you the knowledge and analytical skills you need for employment as a technician engineer.

You'll study a range of subjects from a variety of engineering disciplines, and will also cover traditional mechanical disciplines including design, project management, dynamics, statics, thermofluids, and mathematics for engineering. You'll be well prepared to progress onto degree-level courses, as well as enhancing your promotion prospects.

### How do I get a place?

- NC in Engineering, or Engineering Practice, or an NC in Multi Discipline Engineering, or one Higher pass to qualify for full time study

### What will I learn?

- Design
- Project management
- Dynamics
- Statics
- Thermofluids
- Mathematics for Engineering

### What can I do next?

- Progress to undergraduate courses with the HND giving direct entry at second or third year
- Improved promotion prospects in either a technical or management role

## BEng Energy and Environmental Engineering (inc HND Engineering Systems with Renewables)

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

This is a wide-ranging course that will equip you for a career in the renewable, built environment and traditional energy industries.

In Year 1, you'll follow HNC Engineering Systems with Renewables. This new course is designed to make sure you meet the varied needs of industry and commerce.

Progressing to Year 2, you'll follow HND Engineering Systems with Renewables. The aim of this HND is to provide you with the solid foundation and practical skills in advanced theories of engineering systems which you'll need for further study and in your future career. You'll use the latest simulation and design software and study a variety of technical subjects, from Renewable Energy Systems to CAD. Here, you'll also complete your Graded Unit examinations in Engineering Systems. This course is designed to align you with undergraduate degree requirements.

At degree-level Year 3 & 4, you'll continue your studies on the BEng Honours Energy and Environmental Engineering course at Napier University, giving you the in-depth understanding you need for a career in the renewable, built environment and traditional energy industries.

In association with



As an energy engineer, you'll be exploring cleaner, more efficient ways of using fossil fuels, while investigating and developing systems using renewable and sustainable resources, such as solar and wind energy.

### How do I get a place?

- You'll need to have an NC in Engineering or Engineering Practice or an NC in Multi Discipline Engineering
- You'll need one Higher pass in Maths or Physics to qualify for full time study

### What will I learn?

- HNC Engineering Systems with Renewables
- HND Engineering Systems with Renewables
- BEng Honours Energy and Environmental Engineering
- Advanced Theories of Engineering Systems
- Simulation and Design Software
- Thermofluids
- Materials
- CAD
- Quality Management
- Mathematics 3
- Renewable Energy Systems

### What can I do next?

- This course is aligned with the Universities requirements
- Graduate or Technical engineering position

## BEng Mechanical Engineering (incorporating HND Mechanical Engineering)

Campus: Midlothian

Mode of Attendance: Full-Time

### What is this course about?

If you're looking to develop interests in the renewable sector, this in-depth course is ideal.

In Year 1, you'll follow HNC Mechanical Engineering. This new course is designed to meet the varied needs of industry and commerce. On completion of the core elements here, you'll progress to Year 2.

Year 2 follows the HND in Mechanical Engineering. The aim of this HND is to provide you with a solid foundation and practical skills in advanced theories of engineering systems. You'll use the latest simulation and design software and will study a range of technical subjects – from Thermofluids to Engineering Principles, as well as further HN units that are the building blocks of the mechanical engineering discipline. This course will ensure you meet undergraduate degree requirements.

At degree-level Year 3 & 4, you'll study at Heriot-Watt or the University of Aberdeen. It's a dedicated course bringing together the subjects that are specific to mechanical engineers. You'll study to a very high standard in mechanical engineering, developing transferable skills and allowing you to develop skills you need to solve mechanical and manufacturing engineering problems - essential for your future engineering career.

In association with



### How do I get a place?

- You'll need to have an NC in Engineering or Engineering Practice or an NC in Multi Discipline Engineering
- You'll need one Higher pass in Maths or Physics to qualify for full time study

### What will I learn?

- HNC Mechanical Engineering
- HND Mechanical Engineering
- BEng Mechanical Engineering
- Advanced theories of Engineering Systems
- Simulation & Design Software
- Thermofluids
- Dynamics
- Statics and Strength of Materials
- CAD
- Mathematics 3
- Safety Engineering
- Engineering Principles

### What can I do next?

- Employment in the industry
- Further related studies at university

## CCN1 Domestic Gas Safety

Campus: Midlothian

Mode of Attendance: Block Release

### What is this course about?

Edinburgh College is the largest training centre for Plumbing & Gas in Edinburgh and the Southeast of Scotland. We offer training courses at our Midlothian Campus (Eskbank). The training is carried out in a modern well equipped facility in a relaxed and friendly environment.

BPEC training's Core Domestic Natural Gas Safety (CCN1) course and appliances, initial training & assessment are a necessary requirement of the Nationally Accredited Certification Scheme for Gas Fitting Operatives (ACS).

### How do I get a place?

The CCN1 gas course (initial training & assessment) is available for operatives who have previously held the core domestic natural gas safety (CCN1) qualification but have let it expire more than 12 months ago.

### What will I learn?

The BPEC five day Core Domestic Gas Safety (CCN1) course, plus appliances includes training and initial assessment on the following:

- CCN1 - Core Domestic Gas Safety (with effect from 1st April 2012, the Combustion Performance Analysis (CPA1) module is included within CCN1)
- CENWAT - Central Heating Boilers & Water Heater
- CKR1 - Cookers
- HTR1 - Space Heaters (including Gas Fires & Wall Heaters)
- MET1 - Meters

### What can I do next?

Not applicable

## CCN1 Training

Campus: Midlothian

Mode of Attendance: Part-Time

### What is this course about?

Edinburgh College is the largest training centre for Plumbing & Gas in Edinburgh and the Southeast of Scotland. We offer training courses at our Midlothian Campus (Eskbank). The training is carried out in a modern well equipped facility in a relaxed and friendly environment.

BPEC training's Core Domestic Natural Gas Safety (CCN1) course and appliances, initial training & assessment are a necessary requirement of the Nationally Accredited Certification Scheme for Gas Fitting Operatives (ACS).

To check our availability and booking for any of our courses please contact our Gas Co-ordinator Sheila McKenzie, telephone number 0131 344 7500.

### How do I get a place?

The CCN1 gas courses (initial training & assessment) are available for operatives who have previously held the core domestic natural gas safety (CCN1) qualification but have let it expire more than 12 months ago.

### What will I learn?

The BPEC five day Core Domestic Gas Safety (CCN1) course, plus appliances includes training and initial assessment on the following:

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- CENWAT - Central Heating Boilers & Water Heater
- CKR1 - Cookers
- HTR1 - Space Heaters (including Gas Fires & Wall Heaters)
- MET1 - Meters

### What can I do next?

Not applicable

## Gas Specialist Training and Assessment

Campus: Midlothian

Mode of Attendance: Part-Time

### What is this course about?

This is a part-time course in Gas Specialist Training, with extra training days given if required. It's perfect if you've previously held a core domestic natural gas safety qualification (CCN1) and wish to become qualified again. Edinburgh College is the largest Plumbing and Gas training centre in south east Scotland, making us a great choice to develop the skills you need as a gas specialist. We offer training at our Midlothian Campus (Eskbank), carried out in a modern, well-equipped facility in a relaxed and friendly environment. The BPEC Core Domestic Natural Gas Safety (CCN1) and appliances initial training and assessment are a necessary requirement of the Nationally Accredited Certification Scheme for Gas Fitting Operatives (ACS). This course therefore ensures you meet industry safety requirements.

### How do I get a place?

The Gas Specialist courses are available for operatives who have previously held the core domestic natural gas safety (CCN1) qualification but have let it expire more than 12 months ago.

### What will I learn?

- CENWAT - Central Heating Boilers & Water Heater
- CKR1 - Cookers
- HTR1 - Space Heaters (including Gas Fires & Wall Heaters)
- MET1 - Meters

### What can I do next?

To check our availability and booking for any of our courses please contact our Gas Co-ordinator:

Sheila McKenzie.

Tel: 0131 344 7500

Email: [sheila.mckenzie@edinburghcollege.ac.uk](mailto:sheila.mckenzie@edinburghcollege.ac.uk)





**0131 660 1010**

**[edinburghcollege.ac.uk/courses](http://edinburghcollege.ac.uk/courses)**

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Our course portfolio may be subject to alteration.  
For information or to speak to an advisor call 0131 660 1010