

Welcome to Fabrication and Welding At Keighley College

Course Details



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Introduction

This handbook supports the aims of the Fabrication and Welding department, by providing college policy and course information to learners, so that they are more aware of the progression of their studies and requirements for successful completion. Students should then be able to make informed decisions towards their target qualifications and future vocation.

Fabrication and Welding work is much more than just joining 2 pieces of steel together or making some simple fabricated component. There is a great deal of skill required in order to produce work to the required standards, together with the under-pinning knowledge.

A qualified Fabricator/Welder who can produce work to the highest standards can expect to earn large salaries, and could even work not only in the UK but in many countries overseas.

The courses offered here provide the foundation training and knowledge needed for learners to eventually become qualified Fabricator/Welders.

It is hoped that this handbook will clarify how the courses are structured, operated, assessed and how certification is awarded to successful learners. Also included will be information on how to progress to further courses, as well as what to do in the event of an unsuccessful result.

Courses Offered

Keighley College offers a range of courses, tailored to meet the needs of the Fabrication and Welding industry. The programme enables successful candidates to become Fabricator/Welders and provides a platform of knowledge on which to build progression.

The training time is, dependant on which course most fits the needs and skills of the applicant.

Our programmes combine a range of under pinning knowledge and workshop skills into one package, which gives students a range of industrially recognised abilities.

We assess our programmes in the workshop and classroom, and cover aspects of the regular activities that a Fabricator/Welder is likely to come across on a daily basis.

The courses offered are either a Technical Certificate (which consists of practical assessments, and both external on-line examinations, and internal written examinations), or an NVQ and as such is assessed "on the job." Both types of courses enable students to develop their skills to recognised industrial standards.

An apprenticeship will include both of the aforementioned, technical certificate and an NVQ.

Full Time City & Guilds Level 1 Certificate in Engineering **2850**



Area

Description

Who is the qualification for?

This certificate is aimed at learners who:
Intend to follow an Apprenticeship or Advanced Modern Apprenticeship Programme.
Wish for career progression within engineering.
Wish to develop the skills learnt from other qualifications.

What does the qualification cover?

It allows learners to learn, develop and practise the basic introductory skills required for employment and for career progression in the engineering sector.

What opportunities for progression are there?

It allows learners to progress into employment or to develop further welding skills with City & Guilds

Overview

To gain the full qualification candidates are required to successfully complete five units from the pathway. Both practical and theory assessments are graded.

101: Working in Engineering (on line test)

111: Welding by MIG process (written test and practical assessment)

110: Welding by TIG process (written test and practical assessment)

108 : Fabricating Plate-Work (written test and practical assessment)

Full Time Welding Programme City & Guilds Level 2 7682-20

Performing Engineering Operations



Overview

There are a number of units in the NVQ programme, three of them are mandatory and the others are optional. It is the optional units that give the qualification its industrial focus. The mandatory units contain elements that are common and vital to all workers in all vocational areas. The level of understanding and detailed requirements of the units, differ with the level of the award. Level one and level two mandatory units have the same name, but different element contents.

Compulsory Unit titles for PEO:

Unit 201: Working Safely in an Engineering Environment

Unit 202: Carrying out engineering activities efficiently and effectively

Unit 203: Using and Communicating Technical Information

Optional Units for level 1:

Using manual metal arc welding equipment

Using manual TIG welding equipment

Using semi-automatic MIG or MAG welding equipment

Carrying out sheet metal cutting, forming and assembly activities

Cutting and shaping platework components

City & Guilds 2850



Technical Certificate

Overview

This is a vocationally related qualification designed to meet the needs of candidates who want to work in the sector, provides underpinning knowledge, and enables candidates to have a component for the apprenticeship framework. Candidates would not normally be considered for enrolment onto a level 3 course without first completing level 2, and is a part time course. To gain the full qualification candidates are required to successfully complete five units from the pathway. Both practical and theory assessments are graded.

Compulsory Unit titles for Technical Certificate:

- 201: Working in Engineering (on line test)
- 202: Engineering Technology (on line test)
- 212: Fabrication and Welding Technology (written test)

Optional Units (Any two):

- 214: Welding by MIG process (written test and practical assessment)
- 213: Welding by TIG process (written test and practical assessment)
- 215: Welding by Manual metal arc process (written test and practical assessment)
- 217: Fabricating Sheet metalwork (written test and practical assessment)
- 218: Fabricating Plate-Work (written test and practical assessment)

Safety requirements in the Workshop

All practical work will be undertaken in the Fabrication and Welding workshop, where training, guidance and supervision will be provided for all activities.

At all times, all students are required to:

- Wear suitable protective clothing and steel toed safety shoes or boots. **Learners without safety footwear will be denied access to the workshop.**
- Wear eye protection when there is the slightest possibility of flying particles and for all drilling activities
- Comply with all HASAWA requirements relevant to the operations undertaken in the workshop.

General working practices:

- Be respectful of other students, their work and working environment.
- Use tools and equipment in a safe manner, and for the specific purpose for which each was designed. Any tools or equipment found to be defective, must be removed from use, and reported to the lecturer in charge as soon as any defect is noticed.
- Students should ensure that all tools and equipment are left in a clean and safe condition and returned to their correct location.
- Students are not allowed to use machinery of any kind until they have had instruction on it's safe and proper use, and authorisation from the lecturer in charge.
- Students will be expected to ensure that their work area is kept tidy, with all waste and surplus materials placed safely in appropriate containers.
- Tools are to be returned to their appropriate location at the end of each workshop period.
- Floor areas and bench tops must be kept clear of debris, and excess tools whilst working, and at the end the job. **This may include clearing collective mess like communal drilling swarf etc.**
- Students who engage in any dangerous activities, are risking summary disciplinary action, and possible dismissal from the course and college.

I have been made aware of and accept the terms and conditions for working in the Fabrication and Welding Workshop:

Students Name:.....

Students Signature:..... Date:.....

Tutors Signature:..... Date:.....

(When signed, this page is to be copied and kept on file for any future reference

Ownership

In this modern age of helicopters, snow bikes and world communication, why do people still want to walk across the Arctic? Surely it would be easier to cross the North Pole by aircraft?

The answer is in the phrase “**want to**”. Humans have strong ambitions for personal achievement.

Ambition is the fuel that feeds an idea and moves it from imagination into reality, creating things that may never have existed before.

Determination works alongside ambition to make the difference between success and failure.

Thomas Edison worked hard and persevered to patent many hundreds of inventions. Some of them such as the light bulb, phonograph, and the electrical dynamo have shaped the world we live in today.

Edison fully realised the need for determination and ambition. His most famous quote is:

“Invention is 1 percent inspiration and 99 percent perspiration”

This maxim leads into the purpose of this page.

Learners will have to work to achieve their qualifications.

The college and its staff are committed to presenting every opportunity that enables learners to take on board all the information, training and resources needed to achieve their qualification.

There are areas within programmes of study which are the sole responsibility of learners and areas which are the sole responsibility of the college and its staff. Many other areas are the joint responsibility of both the college and the learner.

The following page sets out college and learner responsibilities in an attempt to clear up any misunderstandings that may arise in the future.

College Roles and Responsibilities

Responsibilities and duties of the college staff:

- To ensure adequate facilities and staff for effective teaching and practical training.
- To start lessons punctually, and ensure the health, safety and welfare of learners, while in college workshops and classes.
- To deliver syllabus subjects, targets and reviews relevant to any and all programmes of study regularly, and in line with the college's guidelines on teaching and learning.
- Monitor student attendance, and report or record absences, lateness, and behaviour likely to cause concern or disruption to the college, its staff, or other learners.
- Provide prompt responses to student queries regarding their current programme of study.
- Provide prompt assessments of learners work and to feedback any results, guidance or comments in a professional manner.
- Assist all learners to participate equally in the learning process, and provide any additional support needed by individual learners or groups.

Learner Roles and Responsibilities

Responsibilities and duties of Learners:

- To attend class punctually with all relevant stationary.
- Comply with the colleges health and safety policies.
- To contact the college in the event of absences.
- To participate equally in all classroom and workshop activities as required by the tutor.
- To actively work towards the performance criteria and targets set by the tutor.
- To ensure all work, assignments, and homework, is presented for marking on time.



Additional Programmes:
Coded Welding



TRAINING AND TESTING OF A WELDER MAKES SOUND BUSINESS SENSE.

Professionally trained and certificated welders improve customer confidence, reduce the need for rework, with its associated costs, whilst improving repeatability, quality and productivity. European standards reinforce the importance of welding competence, placing stringent controls on the industry for the protection of users.

Keighley College can offer training and testing in MMA, MAGs and TAG processes and we offer training and certification in BS 4872, BS EN 287, ASME IX and ISO 9606.

CSWIP 3.0 TRAINING AND CERTIFICATION

Welding inspection teaching before the CSWIP 3.0 exam, including:

- visual inspection procedures
- relevant codes of practice, terms and definitions
- welding processes and typical welding defects
- weld measurements
- typical documentation and requirements
- practical inspection and reporting

Do's and Don'ts for successful learning

Please ensure that you do:

- Arrive on time for your lesson with all the equipment and notes you need.
- Have a suitable, healthy breakfast before the session starts.
- Get sufficient sleep, because tired students are usually unsuccessful.
- Hand in your work on time.
- Change your workshop footwear before leaving A floor.

Please make sure that you don't:

- Arrive tired or hungry, to prevent the tutors ejecting you from class.
- Turn up without equipment, notes or resources.
- Have any earphones visible, you may be a victim of a misunderstanding.
- Use your mobile in class, unless instructed to do so.
- Turn up late saying you had to go to the ICT suite first, It is no excuse.
- Do anything that might put your qualification at risk.

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Keighley College

