

mathematics for engineering technicians, mechanical and electronic principles, properties and applications of engineering materials, mechanical systems and industrial robot technology. There would also be an opportunity to further access the ICE to develop further skills in preparing and using CNC turning machines and experiment with additive & reductive prototyping, including 3D printing.

Higher National Certificate (HNC) & Higher National Diploma (HND) in Engineering

Engineering is a broad industry encompassing management, cutting edge technology and engineering understanding. This course is intended to be a progression from a Level 3 Apprenticeship, and is a stepping-stone to higher education for those who just wish to study at a higher level part-time. This course will cover vocationally relevant subjects that will enhance your knowledge of the industry as well as the softer skills like time management. Typically this will be day release, encompassing twilight sessions and an expectation at this level that a proportion of the course is independent study.

Higher Apprenticeships

Higher Apprenticeship programmes are aimed at providing higher level skills for those who have displayed the right aptitude in their apprenticeship, or for those progressing into employment with suitable A Levels. These programmes are often delivered in conjunction with a HNC (or Foundation Degree) and work related projects to display competence.

Higher Education

In addition to the HNC/HND provision which is accessible at College, there will be an opportunity to further develop both your academic and practical skills to enable you to become an analytical thinker and advanced problem solver. You will also develop and apply research skills to gain a First Degree and Master's Degree programme through full-time or part-time modes of study, whilst supported through employment.

INTERESTED IN FINDING OUT MORE?

Visit: www.keighleyice.org
www.leedscitycollege.ac.uk/engineering

Contact: Course Enquiries

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ENGINEER YOUR FUTURE AT KEIGHLEY CAMPUS

DO YOU WANT TO SHAPE THE FUTURE?

BE AT THE CUTTING EDGE OF TECHNOLOGY?

**ARE YOU THE NEXT GUY MARTIN,
JAMES DYSON OR EMILY CUMMINS?**

Be an Engineer.

YOU COULD PIONEER THE LATEST PROSTHETIC LIMB, OR DEVELOP CLEAN ENERGIES TO SAVE THE PLANET. ENGINEERS SOLVE PROBLEMS AND MAKE A DIFFERENCE - SO COULD YOU!

Keighley Campus is bringing Engineering training back to the Aire Valley. In January 2015 an exciting new ICE Centre will open in Keighley Campus to provide Engineering skills training and qualifications to young people.

The CE:AME Industrial Centre of Excellence (ICE) for Advanced Manufacturing & Engineering (Creative & Digital Technologies) has been created to ensure that students can gain the skills and experience necessary for a successful career in engineering and manufacturing. Developed in partnership with Bradford Council and Oakbank School, the Industrial Centre of Excellence brings together local schools and employers to support young people wishing to enter a career in the Engineering and manufacturing sectors. The facility reflects the clean and high tech modern engineering and manufacturing environment and is a far cry from the traditional image of the sector.

The Centre is managed by a Board of employers who ensure that the curriculum is relevant and that it prepares students appropriately for the world of work. The Industrial Centre of Excellence aims to make all project work industry based and as real as possible by working closely with the Board. In addition all students attending the ICE are offered work placement opportunities with local employers.

The ICE Board is currently made up of the following employers:

**Airedale Springs Ltd – Haworth
Advanced Actuators Ltd – Silsden
Byworth Boilers – Keighley
Guyson Ltd – Skipton**

**Metalcraft Europe Ltd - Bradford
Principle Healthcare – Skipton
Keighley Laboratories – Keighley**

In addition to the Board members there will be another 40 engineering employers offering work placement opportunities to our students.

The Government is making engineering a key priority and as such the ICE will provide courses to get you into employment and further your career. Engineering is a skills shortage area and is a rewarding and varied career for anyone who wishes to choose it. There are over 1.2 Million engineers required in the UK by 2020 and starting salaries for qualified engineers range from £25k - £50k+, so there has never been a better time to start your engineering training.

13% of jobs in the Bradford area are in manufacturing and engineering with the number of jobs in this sector growing by 18% since 2009 and continuing to grow. Engineering companies in the region are involved in a huge variety of activities including aerospace, automotive, oil and gas, deep sea exploration, medical, military and food manufacturing.

WHAT IS ENGINEERING?

Engineering is all about problem solving using specialist technical and practical skills. It's all about maths, physics, research, prototypes, design, maintenance and production.

Every industry and every area of society depends on engineers. Engineers provide the technological solutions to challenges in all aspects of our lives. They design, manufacture and maintain almost everything people

and industries use; from iPads, to aircraft, buildings and nuclear reactors. Advances in technology would be impossible without engineers; so the people who work in this sector are vitally important in developing our future.

Engineering careers are constantly varied in terms of their job responsibilities, but also in their working locations. As an engineer you could be working in an office, in a laboratory, on an oil rig in the middle of the ocean, in a factory, or even in outer space.

WHAT CAN YOU STUDY?

An engineering GCSE or Apprenticeship could just be the start – a career in engineering can give you access to qualifications up to Degree and Masters level.

Engineering Taster Days

Sign up for an ICE Taster Day and take part in an event aimed at school groups to introduce the world of engineering and the opportunities available to young people interested in pursuing a career in this diverse industry. The day will provide access to a wide range of high quality equipment available within the ICE as well as the wider resources available within the campus.

GCSE Engineering

Keighley Campus is currently developing a GCSE in Engineering in partnership with Oakbank School to provide year 11 school leavers with a GCSE Engineering qualification. The course will involve aspects of the programme being delivered at school, which will be supported by practical experience in the ICE to support skills in fabrication, pneumatics and electronics.

Engineering Apprenticeship

Apprenticeships are all about earning while you learn and investing in your future. Apprentice's work towards nationally

recognised qualifications – generally at college. You will also learn the precise skills needed for the job you are training for. Apprenticeships usually take between two and four years to complete. For further details on Apprenticeships email: apprenticeships@leedscitycollege.ac.uk

NVQ in Performing Engineering Operations, Level 2 & 3 & BTEC 30 Credit Diploma

This course will help you to develop the key skills needed for working within the Engineering industry following a pathway designed to lead and/or support you in becoming an apprentice. This is an exciting pathway for anyone wishing to study a practical course that will lead into the world of work as a mechanical engineer.

You will gain knowledge and experience in subjects including machining, drilling, centre lathe turning and vertical and horizontal milling, rapid prototyping (including 3D printing) and get to use the latest in computerised (CNC) machinery.

The NVQ course in combination with the BTEC Diploma will give you both the skills you need and the technical knowledge to get you started as a mechanical engineer including; Health & Safety, Engineering Drawing and Commercial Aspects of an Engineering Business.

PROGRESSION PATHWAYS

Diploma in Engineering, Level 3 (90 Credit)

Following the NVQ/BTEC learners can progress onto an Apprenticeship, or undertake a 90 Credit Diploma (topping up to a full Level 3 Diploma) which equates to around 280 UCAS points.

This would further develop your broader engineering skills with units covering: communications, engineering projects,