



**UTC LEEDS**  
UNIVERSITY TECHNICAL COLLEGE

# INSPIRING THE NEXT GENERATION OF LEADING ENGINEERS, SCIENTISTS & INNOVATORS



Year 12 Prospectus 2019-20



 **University  
Technical  
Colleges®**



Be creative!

Be ingenious!

Be inspired!

### The UTC Leeds Employability Skills

The seven employability skills are central to the curriculum and the driving force behind all aspects of UTC Leeds. They were devised in conjunction with our employer and university partners, to ensure that students leaving UTC Leeds are highly employable. Through the unique opportunities that studying at the college provides, students will demonstrate a high level of confidence and skill in these areas, setting them apart from other candidates.

Enquiry and analysis

Teamwork and collaboration

Problem solving and resilience

Leadership and management

Self-management and organisation

Creativity and ingenuity

Technical confidence and technical skills

# Welcome from the Principal

Welcome to UTC Leeds, the first University Technical College in the Leeds area.



Based in the growing educational hub at Leeds South Bank, UTC Leeds is an exciting new type of school created to teach students a range of scientific and technical skills to prepare them for a challenging, stimulating career in engineering and advanced manufacturing.

I am delighted to be your newly appointed Principal of UTC Leeds. I feel extremely honoured and privileged to have been chosen to continue to move the college forward. This is a great opportunity for me to be part of a team that supports our students in becoming the next generation of world-class engineers and scientists. I am passionate about the college, and we are committed to becoming a centre of excellence for academic and technical learning.

I share the governors' vision of creating a hub of excellence for the young people of Leeds and its surrounding areas. The Yorkshire region has a real need for well-trained engineers, and by working closely with local businesses and the University of Leeds, we aim to meet this demand and improve the life chances of our students.

We will achieve this by equipping them with the skills to access college courses, degree opportunities and successful apprenticeships with local businesses.

The governors, in partnership with the Baker Dearing Education Trust, have ensured that UTC Leeds has the best support, equipment and technology at our disposal. We will enthuse and equip ambitious young people and prepare them for future careers in their chosen field, allowing them to learn the most modern and up-to-date skills currently needed and, of course, preparing them for those that are yet to be developed.

I very much look forward to meeting you.

**Alex Burnham**  
Principal

# Introducing UTC Leeds

## Preparing young people for high quality careers

University Technical Colleges (UTCs) have been designed to meet the needs of employers for up-and-coming young talent with the right skill sets and knowledge to fill the jobs of tomorrow.

UTCs take students as young as 14 and offer a combination of technical qualifications alongside GCSEs and A Levels. This combination of academic and technical learning is unique, equipping students for professional careers through places at top universities, as well as through higher and advanced apprenticeships.

Opened in September 2016, UTC Leeds offers high-tech, cutting-edge facilities and a first-class educational experience. The UTC is the first school in the Leeds City Region to provide high-quality academic and vocational training focused specifically on the engineering and advanced technology sectors.

The curriculum is developed with global and regional employers as well as the University of Leeds, and the learning experience includes a broad range of activities with industry professionals and academic experts.



UTC Leeds is supported by over 70 employers, including major industry brands such as AGFA, Siemens and Unilever. Working regularly with employer partners in a professional work environment where expectations are high ensures that students gain the work ethic and attitude that employers are looking for.

Project work is focused on solving real-world issues, not just business issues, but also social, medical and environmental challenges. Inspirational events and national competitions form a key part of students' studies. In addition, students are able to experience a range of city-wide business events featuring leading speakers from across the sciences, and industry, supporting their learning while contributing to an enjoyable, varied educational experience.

For sixth-form students, there are a variety of routes to professional careers available involving different combinations of A Levels and/or technical qualifications, dependent on whether an apprenticeship or university route is preferred.



"The UTC will establish a talent pool of creative, passionate, energised and capable young engineers that will enable Siemens to fill future positions in production, engineering and project roles."

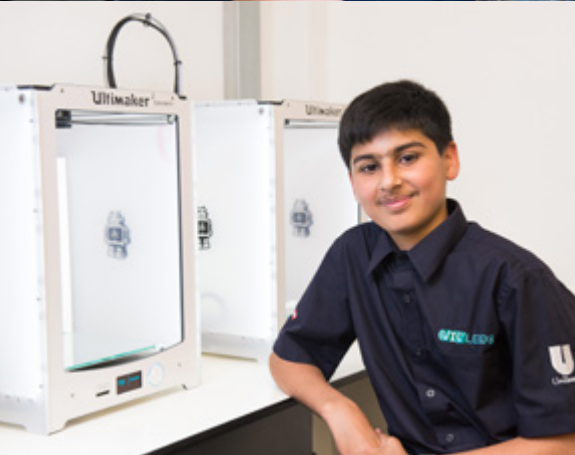
**Simon Nadin**


*General Manager, Siemens Mechanical Drives*





 We equip young people with the technical, personal and professional skills that the UK economy needs.





Bringing together ambitious and enthusiastic young scientists and engineers from across the city and region to achieve great things.

## A Vision for the future

It is our vision to develop students who will make a valuable and lifelong contribution to society and the engineering industry.

Our students will study a stimulating and relevant curriculum and be exposed to cutting-edge technologies and employer-led projects that will give them a challenging, well-rounded education. Students leaving UTC Leeds will be recognised as young people with a strong ambition to succeed, who are independent learners and creative problem-solvers with the social and technical skills that employers look for in today's competitive market.

# Six reasons to choose UTC Leeds

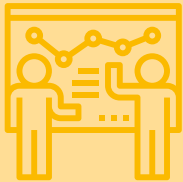
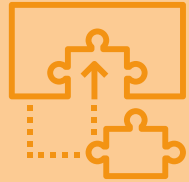


## Exciting, real-life projects

You will work on real-life challenges from the world of work and participate in inspirational workshops and competitions to develop your critical thinking, creativity, team working and problem solving skills.

## A chance to make a difference

You will have the opportunity in your project work to find solutions to real-world social, healthcare, medical and environmental problems that will have a positive impact on the local community and industry.



## Employer-led learning

You will learn from employers in a range of roles through masterclasses, mentoring sessions, trips and work experience, giving you insights to support your choice of future careers.

## Academic excellence

UTC Leeds is sponsored by the University of Leeds, which is among the top 100 in the world for engineering and technology, and our teaching staff are experts in their fields.



## State-of-the-art facilities

You will learn in amazing hi-tech facilities in our unique building, which combines a state-of-the-art educational environment with the city's proud manufacturing heritage.

## Treated like adults

All of our students are focused on their futures and here to learn. This is the first stage of your access to business and employment and you will be treated as an adult and offered support where needed.



# Working with employers

**What makes the UTC special is the close association and partnerships with employers and universities.**

The employer-led curriculum and the whole approach of the UTC enables students to develop their employability skills such as problem-solving, time management, organisation, team working, leadership and communication.

## Problem-solving projects, major competitions and mentoring

The student experience at the UTC is dominated by employer-led projects. These projects drive not only the specialist, technical elements of the curriculum but also the academic and employability elements too.

Students work in project teams to identify, explore and evaluate possible solutions to real-life engineering problems, enriching their learning from across the curriculum while building crucial professional skills. All students have the opportunity to undertake a number of roles within a team and also to participate in national competitions. Support and guidance is provided throughout, with employer partners offering mentoring and financial support to help complete the project.

Y12 students have the option to complete the Extended Project Qualification (equivalent to 0.5 of an A Level) and they may wish to further develop one of their major projects to submit for this qualification.

## Making a difference

Through project work, students have the opportunity to find solutions to problems that will have a positive social, medical or environmental impact. For example, students are tasked with finding creative solutions to utilising wasted heat from within a factory and reducing carbon emissions, or with making life-changing artificial limbs using 3D printing to help people who have lost limbs.

## Developing commercial acumen

Students are challenged to create products for business that not only function and stand out technically but that would be commercially viable and succeed in the marketplace, helping to develop highly transferable business and entrepreneurial skills.

## Work experience and visits

From short, week-long work placements on site through to longer summer placements, the opportunity to learn from skilled professionals in a range of roles and develop technical skills is a key focus of the educational experience at UTC Leeds, including regular trips to a wide variety of workplaces.





These are just some of the 70 employer partners you will be working with





# State-of-the-art facilities

## A unique setting

UTC Leeds is based in a unique setting in the growing educational hub at Leeds South Bank, which is fast becoming known as a vibrant, attractive neighbourhood.

An £11 million pound investment in the UTC has created a modern, cutting-edge college environment with capacity to accommodate 600 students. The college building is adjacent to BRAIME Pressings, a long-established company with a proud history of engineering excellence and now a key employer partner of the UTC.

The state-of-the-art building has been designed with areas designated for scientific

research, advanced design and CAD, manufacturing and robotics, as well as bespoke project spaces, classrooms and a lecture theatre.

The surrounding area is attracting significant ongoing investment to make it an outstanding destination for learning, creativity, leisure, residential and commercial development, already providing a source of industry connections for the UTC.

## World-class facilities

Students at UTC Leeds have access to world-class facilities and cutting-edge new technologies.

Funding from the government and sponsorship from our employer partners has enabled specialist equipment and training to be available for all UTC students to support student learning, research and development in science, engineering, computing, design, graphics and robotics – the kind of facilities and training that are beyond the scope of regular schools and academies.

Students are also encouraged and supported to visit our employer partners and the Faculty of Engineering at the University of Leeds to use industry-specific equipment not available in other educational settings.

Overall, the UTC offers an excellent environment for teaching and learning with



a large lecture theatre to support formal university or industry-style presentations in the timetabled curriculum, as well as classrooms and a cafeteria where students can meet outside of lesson time to socialise with friends.

# Engineering & Advanced Technologies

Engineering and science are all around us. From the cars we drive, the computers and phones we use every day, to the solar panels we see on house roofs, the medical equipment our doctor is using, even the food that we eat!



We will provide you with the skills and qualifications needed to succeed in a wide range of professional sectors including:

- Robotics and control systems
- Software development
- Construction and civil engineering
- Medical and environmental engineering
- Biomechanics and physiology
- Automotive and aeronautical engineering
- Architecture and architectural engineering
- Environmental engineering
- Mechanical engineering
- Telecommunications and mobile communications

The knowledge and skills of an engineer have at some point been involved in the design and manufacture of all these products, making it an incredibly diverse and fast-paced area to work in with the potential to make an impact, bring about change and gain access to exciting opportunities. From designing and constructing visionary buildings, or developing the latest green technology to help save our planet, to inventing new robotic medical devices which can improve healthcare.

To be an engineer, scientist or designer requires curiosity, creativity and communication skills – not just technical and scientific ability – so it needs a wide variety of people. In fact, different types of people, women as well as men, people from different cultural backgrounds, with different ways of seeing the world and a variety of skill sets, will be essential to develop all the up-and-coming opportunities for engineering and advanced technologies in the decades ahead.

UTC Leeds welcomes applications from all types of student with the enthusiasm, interest and determination to study for a career in this exciting and challenging area.

**£26,536 is the average starting salary for a graduate working in engineering and technology. 85% of engineering graduates go into paid work or further study within six months.**



## A woman's world

UTC Leeds is working closely with the WISE campaign ([www.wisecampaign.org.uk](http://www.wisecampaign.org.uk)) to support our female students to access career opportunities and develop as role models for future young women in the city to follow these routes.

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"Engineering provides thousands of interesting and varied career opportunities for women, on a global scale. Women often approach challenges differently to men and can bring an entirely new perspective on solving problems. It's an industry that requires so much more than technical ability. Engineers need an inquisitive mind, disciplined logical thinking, creativity, attention to detail, good communication and leadership skills. Women can make a significant contribution to the future of engineering and be role models for the next generation of female engineers."

**Victoria Hopkins**

*Managing Director, Hopkins Ltd*



## Developing the talent pool in the Leeds City Region

Leeds and the wider city region is home to the largest manufacturing sector in the UK worth over £7 billion pounds!

With over 140,000 employees in 7,000 varied manufacturing businesses, including large companies such as Coca-Cola, Siemens, Cummins, Haribo, BorgWarner, VTL and Turbo Precision, Leeds City Region offers future engineers opportunity to showcase their skills globally and provide innovative solutions to often difficult production challenges.

Students studying at UTC Leeds have access to this amazing wealth of opportunity through our close links with employers. As a result, graduates of UTC Leeds are equipped with the technical, personal and professional skills required to succeed in this dynamic and thriving economy.

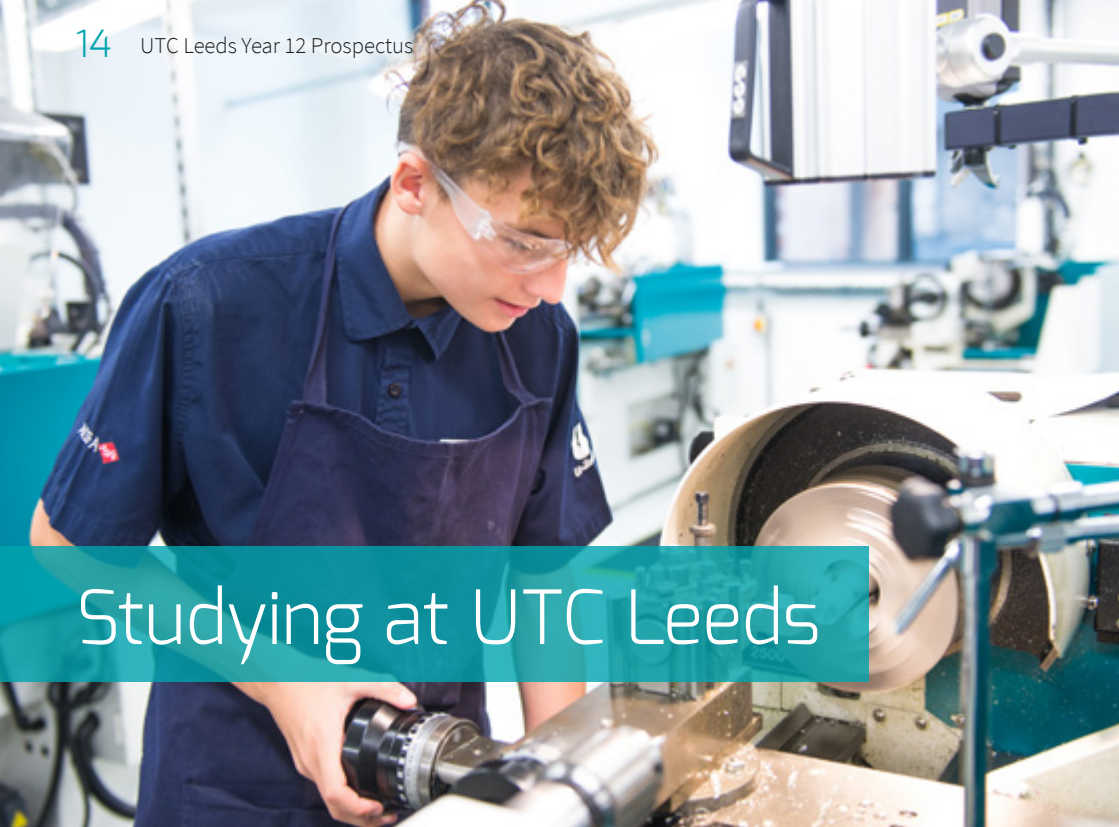
## Leading the world

The UK manufacturing industry is acknowledged as a world leader in several sectors from automotive and aerospace engineering through to the creative industries and utilities. In fact, the UK employs over 5 million engineers and the number of jobs is set to double, with an estimated 1.28 million new science, technology and engineering professionals needed in the UK by 2020 to compete in the global market.

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"We believe the UTC will help to develop the next generation of engineers and manufacturers in a whole range of related disciplines, firing up once more the industrial strength of the North."

**Roger Marsh** *Chair, Leeds City Region Enterprise Partnership*



# Studying at UTC Leeds

Our exciting curriculum offer, including employer-led projects and enrichment activities, is designed to give students a well-rounded education to open up the best possible opportunities for future study and career progression.

It enables students to develop the following key employability skills that are highly sought after by today's leading employers:

## The UTC Leeds Employability Skills

Enquiry and analysis	Teamwork and collaboration
Problem solving and resilience	Leadership and management
Self-management and organisation	Creativity and ingenuity
Technical confidence and technical skills	

The seven employability skills are central to the curriculum and the driving force behind all aspects of UTC Leeds. They were devised in conjunction with our employer and university partners, to ensure that students leaving UTC Leeds are highly employable. Through the unique opportunities that studying at the college provides, students will demonstrate a high level of confidence and skill in these areas, setting them apart from other candidates.

## Level 3 (GCE A Levels and Technical awards)

Students can choose from the two pathways shown below.

All students will follow a core curriculum in mathematics and engineering and can then opt to personalise their curriculum with further A Level subjects and/or a second engineering qualification, as shown in the pathway table below:

Mathematics*	+	Single Engineering Technical award 1 x A Level equivalent	+	2 further A Level options	+	EPQ (Extended Project Qualification)
A Level						
Level 3 Core	+	Double Engineering Technical award 2 x A Level equivalents	+	1 further A Level option	+	EPQ (Extended Project Qualification)

\* The level of mathematics that you study will depend on your GCSE grade.

You can personalise your curriculum by studying further A Levels in:

Physics	Chemistry	Biology
Computer Science	Further Mathematics	Product Design

### Build knowledge and understanding of engineering through:

Contributing in teams to a series of industry-led major projects

Meeting skilled professionals and understanding roles, pathways and career opportunities

Partnering with the engineering faculty at the University of Leeds

Working with mentors from industry and education

### Develop life skills, independence and knowledge through:

A curriculum with embedded opportunities for students to develop employability skills

Leading and taking part in enrichment activities

Taking part in RE, PSHE, Citizenship and sports activities

Receiving the very best in careers education

The Single Engineering course covers a wide range of engineering topics and provides an excellent foundation for further engineering study or apprenticeships in the full range of engineering sectors. If you opt for Double Engineering, you will complete the Single Engineering course and then have the option to specialise in either Engineering Design or Mechatronics.



## Monitoring progress

In supporting our students on their journey to the best grades, UTC Leeds' teachers continuously monitor each student's progress and adapt the lessons and tasks accordingly. Progress is formally assessed in each subject and shared with students and parents three times a year. Data from these progress checks is used to inform the provision of additional support for students where necessary.



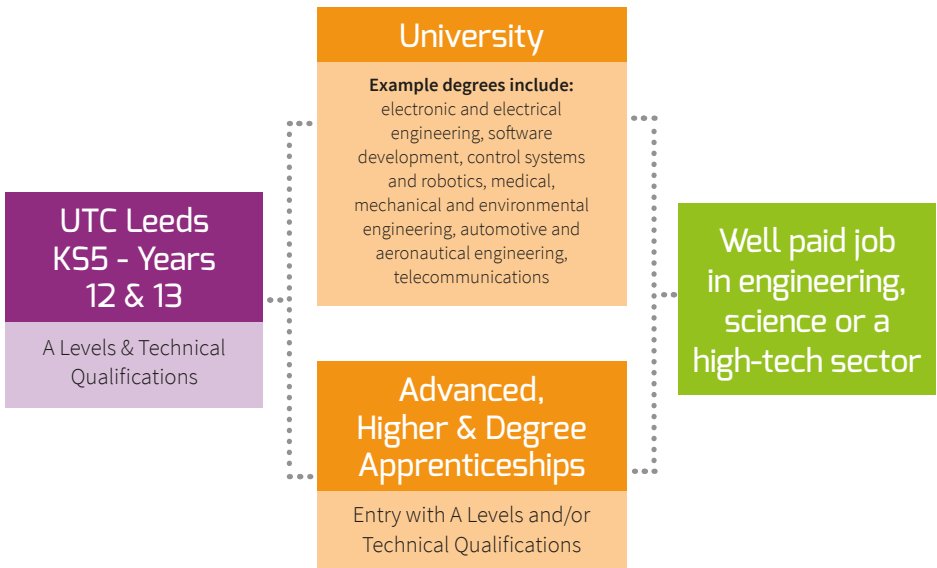
# Pathways after Key Stage 5

At the UTC, excellence is our driving force. We want to ensure that you are equipped for a fulfilling and rewarding career, whether you progress onto an apprenticeship, into university, or directly into employment supported by continuous professional development.

We work with our extensive range of partners, including universities, employers, specialist training centres and apprenticeship providers, to offer you the widest possible range of options for progressing from the UTC.

At every stage, you will have access to independent advice and guidance as well as tutor and mentor support to help you choose the right option for you.

Students graduating at age 18 will be fully prepared and qualified to progress to undergraduate degree courses at universities or Higher and Degree Level apprenticeship programmes with approved employers.



# Student experience

At UTC Leeds, you feel as though you are working in a supportive business environment.



Our students become part of a dynamic, career focused, enthusiastic community of engineers and scientists.



The day starts at 8.45am and ends at 5.00pm\* to provide a greater range of learning opportunities. You will have time set aside for project work and independent study, with support to help you where you need it.

There are high expectations for standards of behaviour and personal conduct at all times, reflecting the professional environment of the UTC.

Technology is a core part of the learning experience at the UTC, preparing you for the world of work.

All students have the opportunity to experience a variety of activities to enrich their learning, broaden their horizons and to offer the chance to try out new things or follow up interests. These can range from sporting and social activities to hobby clubs, cultural awareness sessions, language and enterprise clubs.

Alongside studies there are plenty of opportunities to relax in the canteen. Students report that it is easy to make friends as everyone shares similar interests.

Dedicated, one-to-one educational and pastoral support is available to all students, with careers advice and guidance integrated throughout.

Our college is committed to ensuring your son or daughter is supported emotionally as well as academically. Miss Dean and Mrs Wilson head up our safeguarding team and are available to meet with you and your son or daughter to discuss any concerns or needs they may have.

*\*Our Y12 and Y13 students have a flexible timetable designed around their subject choices and therefore their college day may finish before 5:00pm*

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"It was definitely the right decision to come here; they put a huge emphasis on Maths and Physics, which is good because a lot of schools don't. I've been involved in a lot of industry projects, and there are more opportunities here. I completed an NVQ too which I wouldn't have done elsewhere."

Harry



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"It's been really good being at UTC, you have a lot more opportunities. I've just been writing my personal statement and I've found I have a lot more left to write because I've got a lot more experience within the industry."

Chloe



# Day in the life

## Our students benefit from a longer working day (8:45 AM to 5.00\* PM).

At UTC Leeds, our Y12 and Y13 students have a more flexible timetable to support them to develop the key employability skills of self-management and organisation. Y12 and Y13 students have lessons during the normal UTC college day, but are permitted to utilise their study periods to participate in work experience, work place and university visits, as well as enrichment activities, to ensure they can make strong applications to their next career stage following their education at UTC Leeds.

**8:30 AM**

I arrive and have a drink with some friends in the canteen area.

**8:45 AM**

I have a profile team meeting this morning. This is where we discuss and develop a wide range of personal attributes and employability skills and review the previous week in college. We produce a personal action plan to ensure we continue to make excellent progress, both academically and in terms of our employability skills.

**9:00 AM**

Physics A-level lesson in the practical lab. This is an opportunity to test this theory that we have learnt about stress and strain. These studies relate directly to units of the Mechatronics course that I'm studying in engineering.

**11:00 AM**

I am meeting with Lisa and Tahir in the library at break to share results from our practical session. I'm going to need these for the independent study session.

**11:20 AM**

We are set work for independent study sessions for all of our subjects. I have preparatory work set for the next maths lesson. It is great to have the Post 16 study area that we can use to do this work.

**12:20 PM**

We are in the Design & Media suite for a session on the CAD machines. My design is coming on well and I will be ready to move onto manufacturing it later. I will be using what I did this morning to produce a prototype on the 3-D printer.

**1:20 PM**

Lunch. Catch up with friends and eat in the canteen or go into town to eat.

**2:00 PM**

Maths lesson to go through preparatory work from the independent study session and work towards A-level maths.

**3:00 PM**

Final session today is enrichment. I usually take part in the Green Power Racing car team activity, but today I am using my enrichment time for a work place visit to Unilever ahead of my work experience placement next month.

**5:00 PM**

Finish. Another enjoyable day. I'm really looking forward to my visit to Siemens tomorrow.

**\*Our Y12 and Y13 students have a flexible timetable designed around their subject choices and therefore their college day may finish before 5:00pm**



# Real-life challenges

Working with employer partners and experts at the University of Leeds is at the heart of everything we do at the UTC, providing students with the technical, personal and professional skills to stand out from the crowd.

## Green energy from hot acid

Global supplier to the printing industry, Agfa Graphics, is represented on the Board of Governors of UTC Leeds and provides significant support including this project challenge.

Agfa uses sulphuric acid to anodise aluminium. The acid is delivered to the factory at 98% and then diluted to feed the process at 64%. This means that Agfa can reduce road transport journeys, cut costs and reduce traffic emissions involved in delivery. The dilution process is exothermic, producing a great deal of heat, and this heat is currently vented to the atmosphere wasting energy.

UTC students are asked to creatively find ways to use this otherwise wasted heat within the factory. There are significant environmental benefits to using the heat and not using the fossil fuel sources currently used to create heat in the factory. The CO<sub>2</sub> emitted by the factory could be reduced, thus lowering greenhouse gas emissions and reducing factory energy costs.

The aim is for the students to provide a solution that has a positive environmental impact and meets the needs of industry.

## Artificial limbs



Last year, UTC students were asked to take part in a global project called 'Team UnLimbited' to create prosthetic limbs for children in Africa who had lost limbs in landmine blasts. Using the UTC's 3D printers, students produced mechanical hands from a blueprint provided by TeamUnlimbited. The hands give enough movement to pick up a variety of objects. Some users have even learned to ride a bike or play the piano.

UTC Leeds was selected because of its 3D printer facilities. Charity 'Enabling the Future' matches companies or individuals who have 3D printers to people in need of limbs. The UTC has become an officially approved partner of the charity and Year 10 students also built a prosthetic arm for a five-year-old boy.

# Apply now!

UTC Leeds admits students into Year 10 and Year 12. There will be 150 places for entry into Year 12 in September 2019.

If you are looking to apply, please contact us as soon as possible to obtain a copy of our application form, either by calling the admissions team on (0113) 353 0140 or you can download a form online at **[www.utcleeds.co.uk](http://www.utcleeds.co.uk)**

## Entry requirements

The minimum entry requirements for students entering Year 12 in September 2019 are 5 GCSEs grade 4 or above (or equivalent), including English Language and maths. A grade 6 or above (or equivalent) in GCSE maths is also required for students to study A Level maths and for biology, chemistry and physics. All students will continue their study of mathematics at Level 3 standard to enable them to develop the mathematical skills required for engineering qualifications at Level 3. Students who have not achieved a grade 6 in GCSE mathematics will study Core maths as an alternative Level 3 qualification.

UTC Leeds is open to all students from the Leeds City Region, which includes the local authority districts of Barnsley, Bradford, Calderdale, Craven, Harrogate, Kirklees, Leeds, Selby, Wakefield and York.

The UTC encourages applications from girls as well as boys, and from all the diverse communities across the Leeds City Region.

In the event of over-subscription, every attempt will be made to ensure that applicants from across the city region have a fair chance of gaining a place.

Applications must be made by 31st of January 2019 and letters of offer will be issued to applicants by 1st March 2019 for entry in September 2019.

Late applications will be accepted, but places will be subject to availability. The full UTC Leeds admissions policy is available on our website at **[www.utcleeds.co.uk](http://www.utcleeds.co.uk)**.

If you are interested but need more information, please come to one of our open events (see next page). Or, if there are no upcoming open events, please contact us to arrange a visit to the UTC.

## Applications during the school year

For in-year entry during the school year, parents should apply directly to UTC Leeds.

Please contact the admissions team on (0113) 353 0140 or visit the UTC Leeds website **[www.utcleeds.co.uk](http://www.utcleeds.co.uk)**.



# Open house!

## Open events and taster sessions

We offer a range of taster events and talks for both parents/carers and potential students during the 2018/19 academic year.

Please come along to meet with our Principal, Alex Burnham, and find out more about UTC Leeds.

Full details of these events are available on our website  
[www.utcleeds.co.uk](http://www.utcleeds.co.uk)



# UTC LEEDS

UNIVERSITY TECHNICAL COLLEGE

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
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**UTC LEEDS**  
UNIVERSITY TECHNICAL COLLEGE

 RECEPTION

 VISITOR PARKING

 DELIVERIES

 STAFF & DISABLED PARKING

This school is committed to safeguarding and promoting the wellbeing of children and young people and expects all staff, visitors and volunteers to share this commitment.