



Year 10 Entry Course Guide

A STEM-Specialist School
with a Strong Academic
& Technical Focus

utcsouthdurham.org



Contents Year 10 Entry

Welcome to UTC South Durham	1
Student Leaver Profile	3
Why Choose UTC South Durham?	5
Supporting The Next Generation	6
Core Subjects	7
Option Subjects	14
Your Facilities	17
Careers	18
Industry & Community Projects	19
Crew	20
Visit Us & Apply	21



“One of the things I have been most impressed with is how the staff take the time to get to know their students. By doing this they untap their potential so they can be successful in the future.”

Parent, 2022



Welcome to UTC South Durham



A very warm welcome to University Technical College South Durham, a state-funded, purpose-built school and Sixth Form for 14-19 year-olds. Students can join UTC in Year 10 or Sixth Form.

We specialise in STEM subjects (science, technology, engineering and maths), with a focus on engineering and advanced manufacturing. We exist to support young people to become career and life ready, providing them with an excellent academic and technical education alongside developing their professional skills. Our Student Leaver Profile on page 3 outlines the skills and qualities we aim to develop in our students, including communication, collaboration, organisation, perseverance, reflection, and respect.

There are three clear strands to our student experience:

- Academic qualifications: in Years 10 and 11, students study a full set of GCSEs, including maths, English, Science (combined or triple award) and engineering, alongside two subjects of their choice.
- Professional learning: all students are allocated dedicated time, known as 'Crew', to help them develop their professional skills, in line with the Student Leaver Profile. Students also undertake a comprehensive programme of visits and placements in companies, including work experience, in addition to industry-led projects in the UTC and other career-focused enrichment.
- Students also undertake a comprehensive programme of visits and placements in companies, including work experience, in addition to industry-led projects in the UTC and other career-focused enrichment.

This approach to education is proving successful, with employers and parents stating that UTC students have strong core skills and a confidence that sets them up for future careers. Employers describe students as 'confident', 'capable' and 'very employable'. In the feedback to Ofsted inspectors, 95% of parents said they would recommend the UTC to other parents and 99% said that their child is happy.

Our commitment to supporting our students' professional development means that they are highly successful in securing jobs, apprenticeships, and places for further study. In 2022, 100% of Year 11 leavers had a positive destination in education, employment or training. After Year 11, most UTC students progress on to our Sixth Form.

We would be delighted to welcome you to UTC. Please visit us to meet our students and staff, and see our impressive facilities for yourself.



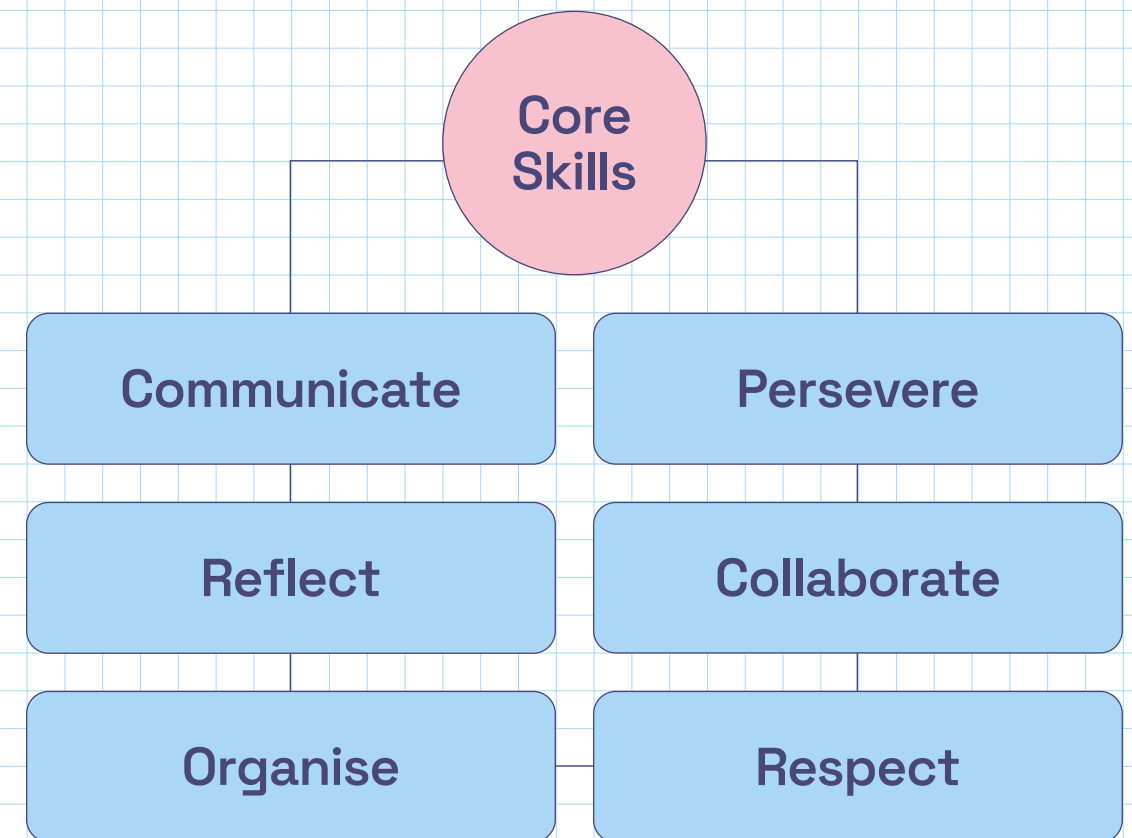
Tom Dower **Principal**

Student Leaver Profile

The SLP has been developed by the UTC community of industry partners, students, parents, community leaders, staff and trustees. It has students career and life ready at its core.

The SLP ensures that our students are ready for their careers. It cements our commitment to a balanced education which goes well beyond that delivered by most schools. It drives everything we do for our students.

Students undertake a range of academic and technical qualifications which gives them the knowledge for the next stage of their career. They work on their core skills so that they are ready for work, highly employable and increasing in confidence. Students undertake a range of activities which give them first-hand experience of the workplace and a variety of options so they can make meaningful choices for their career direction.



Developing core skills are vital for UTC South Durham students as they prepare for the world of work. These skills, encompassing communication, problem-solving, teamwork, and critical thinking, form the foundation of professional success.

In today's competitive job market, academic understanding alone is insufficient in being a successful at an interview. Our industry partners tell us they seek well-rounded individuals capable of adapting to evolving industries and collaborating effectively. Core skills enable our students to excel not only in their chosen fields but also in diverse work environments.

Why Choose UTC South Durham?

UTC South Durham is ideal for young people if they are:

Wanting to focus on STEM and technical subjects

UTC students study engineering qualifications in Years 10 and 11, alongside maths, English and science. They are typically excited about the high-tech world of engineering and technology, and want to work with students, teachers, and professionals who share their enthusiasm.

Wanting a great destination

Our students gain substantial experience of the workplace to build their skills and find out what they want to do. Our students' destinations are important to us and we have a dedicated careers programme which helps students take the first step into their future career. Our dedication to supporting our students in finding the right destination for them is highly successful.

Wanting to gain professional skills

We exist to help young people prepare for the world of work. Professionalism and core skills are built into lessons, and we have dedicated Crew time (see page 20) in which our students develop a portfolio to show the skills they have enhanced or developed in line with the Student Leaver Profile.

Wanting to be treated as young professionals

UTC students are treated like young adults and we encourage students to behave like professionals, helping prepare them for the world of work. School hours are longer, everyone at UTC is on first-name terms, there are no bells so students are responsible for their own time-keeping, and students work closely with industry partners from across the region.



“UTC South Durham is a brilliant school. Staff show the students respect and the students appreciate that and show it back.”

Parent, 2023

Supporting The Next Generation

Our reputation for impressive student support is designed to treat each individual student need. We understand that relevant and focused support is delivered and tailored to every young person.

We have created an environment where each student is valued and feels comfortable being themselves. Staff at the UTC listen to student voices and implement positive changes with them. Some examples of this include:

- Making our building more diverse, we now have inclusive changing facilities
- Opportunities to meet professional health practitioners
- A zero tolerance approach to bullying
- Most importantly, a space where students feel cared for and are happy

“Since our daughter joined UTC we have seen a significant change in her overall confidence, self-esteem and maturity which has been nurtured by all staff but in particular the student support team.”

Parent, 2023



Students study eight or nine GCSE subjects. All students study core subjects of English Language, English Literature, Maths and Engineering in addition to two option subjects. Students also have two hours of Crew (professional development time), two hours a week of PE and access the professional and career experience curriculum.

Core Subjects

English

All students at UTC South Durham study two English GCSE qualifications: English Language and English Literature.

In English Language, students have the opportunity to recognise and empathise with the viewpoints and perspectives of others, as well as being challenged to think and work creatively whilst reading a variety of 19th and 20th century fiction and non-fiction texts.

They also learn how to present their own viewpoints and perspectives on a variety of topics in both spoken and written forms.

In English Literature, students study a variety of poems, plays and prose. They dip into politics and consider socialism versus capitalism; they debate the attributes of good and bad leadership and citizenship; they compare the different perspectives that authors write from. All whilst reading texts from authors such as Shakespeare, Dickens, Owen, Tennyson, Agard, Armitage, Weir, Rumens, and many more!

English at the UTC aims to develop students' skills of retrieval, interpretation, analysis, evaluation, comparison, the crafting of their language and their technical accuracy – all made relevant and transferable to the world of work.

**English at UTC
is made relevant
and transferable
to the world
of work**



Maths

Numeracy skills and mathematical methods are the cornerstone of science, technology and engineering.

Students must be fluent and confident in their maths skills as they progress through the UTC and into future courses or employment.

We teach in line with the national curriculum whilst linking mathematics to real-life and industry applications, particularly in the engineering sector. During visits to our industry partners, students are able to see how such topics as algebra, ratio, geometry, probability and statistics are applied in the workplace. We offer additional support for students who struggle with aspects of the maths curriculum.

“What makes UTC stand out is the care and support they have for every single student.”

Parent, 2022



Science

All Year 10 and Year 11 students at UTC South Durham study either Combined Science or a Triple Award Science course at GCSE. Combined Science is worth two GCSE qualifications and comprises separate units in biology, chemistry and physics. Triple Award Science offers students the opportunity to gain three distinct GCSEs in biology, chemistry and physics.



Biology

Biology is the natural science that studies life and living organisms, including their physical structure, chemical composition, function, development and evolution. Understanding the natural world is important for scientific and technical innovation, and the study of plant and animal biology leads directly to a wide range of careers in medicine and scientific research.



Physics

Physics is the study of the nature and properties of matter and energy, including electricity, atomic structures, forces, waves, magnetism and electromagnetism, and the physics of space.

The principles of science, particularly physics, underpin engineering and advanced manufacturing. Our links with businesses at the cutting edge of the application of sciences show students why physics is so important.



Chemistry

Chemistry concerns the properties of substances, their reactions and interactions with other substances, and the natural laws that describe these changes. Visits to our employer partners and practical chemistry projects and experiments enhance the study of such topics as: atomic structure and the periodic table, the properties of matter, quantitative chemistry, chemical and energy changes, chemical analysis, and chemistry of the atmosphere.

Engineering



Here at UTC South Durham our engineering hall is the heart of our building, and we offer courses which have been chosen by our employer partners to reflect the needs of their future workforce. These courses are delivered through practical application; building students' skills from using entry-level equipment to industry standard machinery.

Engineering Manufacture

Engineering Manufacture enables students to study and experience the different manufacturing practices and processes using the machines, tools and equipment that turn raw materials into new products. Following a design specification, students apply their knowledge and skills by operating manufacturing equipment, including using programmes such as CAD/CAM and CNC equipment.

Engineering Design

Engineering Design is a process used to develop and enhance new products as a response to market opportunities and need. Students are encouraged to consult with real industry and individual clients, to use practical equipment, computer aided design (CAD), and to develop modelling skills to evaluate and make prototype products.

Optional

Systems Control

Systems Control introduces students to the fundamentals of electronic circuits and how microprocessor control systems are used in a variety of domestic and commercial engineering contexts. Students develop practical skills by designing, constructing and testing electronic circuits using appropriate techniques, procedures and equipment, including fault-finding and identifying potential electrical hazards.

Optional

By intergrading skills delivery with experiences of real life projects and work alongside industry and community partners, the PaCE curriculum will provide students with a solid understanding of the world around them. As well as the careers available and deliver the skills they need to be healthy, happy and successful.

Students access PSHE, RSE and RE through the PaCE Curriculum.

(PaCE) Professional & Career Experience

PE & Enrichment

Alongside their studies, students get several opportunities to develop skills, increase their understanding of the world they live in, pursue their interests, and in some cases acquire additional qualifications.

Students in Year 10 and 11 have two hours of PE every week which comprises of a range of sporting activities to build on and embed physical development and transferable, core skills, such as: Communication, problem-solving, teamwork and leadership, and the application and understanding of information. Our on-site gym is available for students to use before and after school, and there are gym and sports clubs which run throughout the week.

There are also a number of optional clubs and activities which students can get involved in, including:

- Science Magnets
- Enriching Drop Down Days
- First Aid Training
- Code Clubs
- National Citizenship Service
- Disneyland Paris residential
- Skiing residential



Option Subjects

Students have the choice of two option subjects. These subjects have been carefully chosen because they have strong relevance to the STEM focus of the UTC and will help students prepare for their future career.

Computer Science

Computer Science at UTC South Durham focuses on preparing our students for the modern digital world and workplace. GCSE Computer Science is about understanding the fundamental mathematical and scientific building blocks of computers, including: programming, algorithms, data representation, computer hardware, and cyber security.

Students also learn programming languages, including Python and SQL. Throughout this course, students are able to reflect on how digital technology is having an impact on wider society, and develop important skills such as problem-solving.

We would recommend that students study the Systems Control engineering course alongside this qualification.

£46,280 is the average salary for Computer Science/IT professionals

Design & Technology

Every product made by humans has been designed and manufactured. Product designers have a responsibility to design useful products which work effectively, and are efficient and environmentally friendly. This GCSE course enables students to consider new and emerging technologies, energy generation and storage, material properties

and developments in new materials, ecological and social footprint, how to create and communicate design ideas, and how to develop a prototype. Understanding the design process and being able to communicate ideas are important skills for designers, engineers and manufacturers.



Topics

- Core and Specialist Technical Principles
- New and emerging technologies
- Energy generation and storage
- Materials and developments in new materials
- Using and processing materials, forces and stresses
- Ecological and social footprint
- Equipment, techniques and processes

Business Studies

Understanding business and how it works is essential in today's **changing economic landscape**. Students learn to understand and apply the fundamental principles

of Business Studies including business start-up and development, finance and marketing, promoting a brand, and recruitment and employability. Business Studies

GCSE uses **real-life context**, including visits to and from our employer partners, to make the content as real and relevant as possible.

Health & Fitness (NCFE)

The Level 1/2 Technical Award in Health and Fitness is designed for learners who want an introduction to health and fitness that includes a vocational and project-based element. The qualification will appeal to learners who wish to pursue a career in the health and fitness sector or progress onto further study, employment or

onto an apprenticeship. It offers breadth and depth of study, incorporating a key core of knowledge and provides opportunities to acquire a number of practical and technical skills whilst exploring the structure and function of body systems, training methods and lifestyles.

Geography

Geography encourages students to investigate the links between the human and physical, addressing such topics as energy resources, sustainability and climate change. During the course, students will undertake **two field trips** examining areas of both the natural and man-made world, whilst evaluating the impact one has upon the other.

Geography GCSE enables students to develop a strong understanding of **populations and demographics**, markets and regions, economic development and globalisation; knowledge and skills which are valued by employers.

2

field trips examining areas of both the natural and man-made world

Information & Creative Technology

How do websites work? How do emails reach your computer? How does the use of computer applications affect your daily life?

These are just some of the questions students will be able to answer by the time they complete the Information and Creative Technology BTEC. This course, equivalent to one GCSE, introduces students to some of the key themes within the IT industry, drawing upon students' own experiences to develop their understanding of online services and the technology that supports them.

During this course, students will study web development and create a Digital Portfolio, in which they can showcase the projects they have created and developed over the two years.



The location deliberately reflects our specialism and places us next to some of the most advanced manufacturing and engineering facilities in the country, enabling students to access fantastic real-world work experiences on our doorstep.

Students have access to science labs, classrooms, computer suites and a gym.

Your Facilities

Careers

UTC South Durham provides a planned careers programme which is delivered across all year groups and is embedded into curriculum learning. The impartial careers advice we offer is tailored to meet the needs of each individual student. In line with the Student Leaver Profile, students leave UTC with the skills and knowledge required to support their entry to further education, training, or employment.

We offer students a wide variety of opportunities that support them to develop their career aspirations, including:

- Industry projects and work experience placements
- Visits to and from industry and business partners
- Careers fairs, drop down days and workshops
- Higher Education taster days
- Mock interviews
- Access to 1-2-1 careers information, advice and guidance

For more information about our careers programme please visit utcsouthdurham.org

“We have been involved in a number of initiatives, from career events, mock interviews, developing digital skills, industry projects to site visits. We have always been extremely impressed by the enthusiasm and capability of the students.”

Costain Group



Industry & Community Projects

Over 150 businesses and organisations are keen to support our students because they know we are developing their future employees. Our students experience a broad selection of industrial sectors and companies from small, local enterprises to multinational corporations. These experiences will support students in making career decisions which are right for them. As well as these projects, students are invited to complete one or two weeks work experience.

Industry Projects & Work Experience Placements

Our students in Years 10 and 12 take part in an industry project which runs throughout the academic year. Working in small teams, students must develop their project with the support of mentors from industry. They are then invited to present their solutions back to industry partners.

Previous projects include: designing a train compartment with Hitachi, considering the well-being of highway workers with the North Yorkshire, North East Highways Community, and developing a rowing boat with a world ocean rower.

Community Projects

Community Projects encourages our students to take their creativity and innovation out into our towns and villages and work with local groups to improve lives within our community.

Previously students have designed mobile youth clubs, renovated a train station and supported local ecology around the school site. The purpose of community projects is to show our students that they can make the positive changes the community want to see.

150

Businesses and organisations are keen to support our students

Companies we work with include



Crew

At UTC, we aim to raise aspirations by helping students to develop the professional skills they need to be successful in the workplace. Dedicated time, known as Crew, is needed to support students to develop the skills and attributes outlined in the Student Leaver Profile.

Crew time gives students the opportunity to work alongside a member of staff and a small group of fellow students to complete a portfolio of work that demonstrates and evidences how they have met the Student Leaver Profile.

Each crew will work together to reflect on their own learning; allowing them to take responsibility to achieve. They will peer assess one another, reflect on their class behaviours, develop their student portfolio, identify gaps in their skills and development and, most importantly, create an action of how they are going to fulfil them.

The crew will become a team, supporting and developing one another to become the best person that they can be. The year ends with students completing a Student Led Conference. An opportunity to present to parents and crew leaders about their learning and success from the year.



Visit Us & Apply

Admissions for Year 10 are made direct to UTC South Durham.
Applications for the following academic year open on 1 September.

Applications can be made online at utcsouthdurham.org. You will need to create an account on our online system, and verify your email address before completing the application.

Once families have applied, students will receive an offer in principle and an invitation to attend a meeting with one of our Senior Leadership Team.

In this meeting, which parents/carers are welcome to attend, we will answer any questions you have and understand the student's career aspirations so we can create the right programme for them.

Please read our admissions policy before submitting an application. The policy can be found at utcsouthdurham.org

Open Evenings

Our open evenings are a fantastic opportunity for you to tour our state of the art facilities whilst speaking to staff and current students about our technical education.



Find out more



Transport

Our aim is to make travel as easy as it can be in order to make the UTC accessible for students.

Students travel from across County Durham, North Yorkshire, Tees Valley and Tyne and Wear. Students use a combination of public transport such as Northern Rail, Arriva, Scarlet, Stagecoach, Dales and District, dedicated UTC minibuses and external coach hire organised by the UTC.

We have discounted deals with public transport companies for student cards and offer support for those that meet household income criteria.

Please contact us directly and refer to our website for further details or please call on **01325 430 250** or email transport@utcsouthdurham.org for more information.



Find out more





admissions@utcsouthdurham.org
01325 430 250

UTC South Durham
Long Tens Way
Aycliffe Business Park
County Durham
DL5 6AP

utcsouthdurham.org



Founding members
of UTC South Durham





admissions@utcsouthdurham.org
01325 430 250

UTC South Durham
Long Tens Way
Aycliffe Business Park
County Durham
DL5 6AP

utcsouthdurham.org



Founding members
of UTC South Durham



HITACHI
Inspire the Next

admissions@utcsouthdurham.org
01325 430 250

UTC South Durham
Long Tens Way
Aycliffe Business Park
County Durham
DL5 6AP

utcsouthdurham.org



All the information included is correct at time of printing
Design by Everything | everything-studio.co.uk