UTC LEEDS
UNIVERSITY TECHNICAL COLLEGE

Year 12 Prospectus 2026/27

Innovate. Collaborate. Engineer.

Principal's Welcome

When I was asked to join UTC Leeds, I was quite simply delighted. The core vision – to inspire the next generation of leading engineers, scientists and innovators – is one that is close to my heart both personally and professionally.

UTC Leeds is fortunate to benefit from strong governance, which has shaped this core vision through the eyes of business and industry experts. Who better to shape the education of our future STEM innovators than their future educators and employers? With strong business links and a working partnership with the University of Leeds, we aim to meet local demand for highly skilled, employable young people and to improve the life chances of our students.

Baker Dearing Educational Trust, our committed governors and our business partners have ensured that UTC Leeds has the best equipment and technology at our disposal. With a commitment to a stimulating and relevant curriculum, cutting-edge technologies and employer-led projects, students leaving UTC Leeds are recognised as young people with a strong ambition to succeed and advanced skills for the modern-day workplace.

Whether you're a prospective student, parent or a business that wants to shape the future of STEM education, we'd love to meet you.

Hannah Wilson
Principal

Scan the QR code to hear more from our 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 skillsets 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 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.

Our 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 names such as Stantec, 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 those relating to business, 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 STEM, supporting their learning while contributing to an enjoyable, varied educational experience.

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

– Simon Nadin, CEO of Flender UK

A Vision for the Future

100% of our students go on to excellent destinations, including top universities and apprenticeships with global employers!

Visit https://bit.ly/UTCKS5_Careers to find out more.

It's our vision to develop students who will make a valuable and lifelong contribution to society and various fields within STEM.

Our students study a stimulating and relevant curriculum using cutting-edge technologies and employer-led projects to deliver a challenging, well-rounded education.

Students leaving UTC Leeds are 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.


PUMA

Why UTC Leeds?

1. Real-World Projects

UTC Leeds students take on real challenges from the world of work, providing them with the technical, personal and professional skills needed to stand out from the crowd.

Case Study: Braime Group Belt Elevators

Braime Group is a manufacturing company that distributes bulk material handling components. They were working on a problem of how to improve the production of small belt bucket elevators and wanted our students to design a portable, safe and fully adjustable alternative.

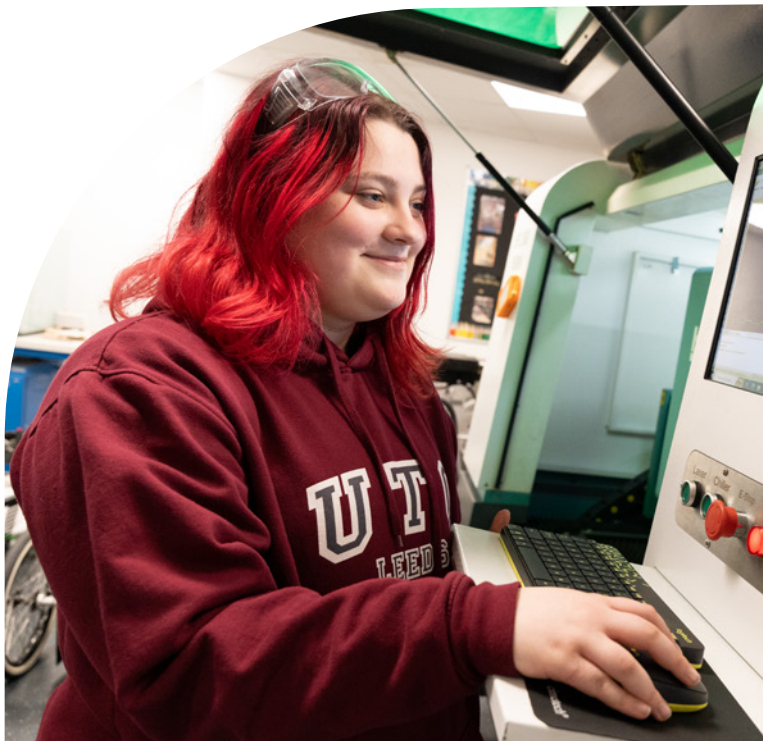
Students designed proposals using computer-aided design (CAD) and made prototypes which they presented to the engineers at Braime. The winning design was fabricated and used by Braime Group, meaning our students had a part in further developing the company's global success story.

2. Chance to Make a Difference

UTC Leeds students have opportunities to work on projects which have a real positive impact on the community both locally and globally.

Case Study: Team UnLimbited Artificial Limbs

UTC Leeds 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 our 3D printers, students produced mechanical hands which gave enough movement to pick up a variety of objects. Some users have even learned to ride a bike or play the piano!



3. Employer-led Learning

Our students learn from local employers in a range of roles through masterclasses, mentoring sessions, trips and work experience. We even have an Annual Interview Day where students are given the chance to take part in mock interviews with a variety of employers who can provide valuable feedback.

We have a huge range of fantastic Industry Partners, including:

ACS
ActionPlas GROUP
AGFA WE EMBODY PRINT
amazon
Arla milklink
ASDA
BRAIME GROUP PLC
Brandon MEDICAL BRILLIANT BY DESIGN
caddick construction
CAE TECHNOLOGY ON POINT
eef The manufacturers' organisation
EngineeringUK
hippo
KIRKSTALL PRECISION ENGINEERING
KIRKSTALL PRECISION ENGINEERING
LWC
Mpac Lambert Ingenious Automation
MPM
Northern Gas Networks
NPL National Physical Laboratory
OPM group Your Label & Packaging Partner
Pland Strength in stainless steel
ROYAL AIR FORCE
ROYAL AIR FORCE REGULAR & RESERVE
SIEMENS Ingenuity for life
SmartSearch///
SMART BUILDINGS
SOUND SOUNDLEISURE CLASSIC JUKEBOXES
Stantec
TransUnion
Unilever
UNIVERSITY OF LEEDS
West & North Yorkshire Chamber of Commerce

4. Academic Excellence

UTC Leeds students benefit from the knowledge and experience of teachers who are experts in their field. Many of our teaching staff have previously worked in industry, and are able to draw upon this first-hand understanding to deliver the highest quality teaching and learning. The UTC is sponsored by the University of Leeds, which is one of the largest higher education institutions in the UK and among the top 100 universities in the world for engineering and technology.

5. Cutting-edge Facilities

At UTC Leeds, we have all the facilities you need to succeed in your studies. As well as the usual areas that you would expect in any school or college (classrooms, science labs, ICT suites), we have a range of specialised spaces and equipment to give you hands-on experience in engineering. This includes CAD machines, CNC equipment and 3D printers!

> **"In my new job I'll be using similar Computer Aided Design software to the Autodesk software I've used before at the UTC, so I'm not just going in blind, I already have knowledge and experience. I'm one step ahead, I'm not starting from scratch."**
>
> *– Callum B, Previous Student*

6. Professional Environment

All of our students are focused on their futures and are here to learn. From how we expect our students to dress, to the independence they receive, to the length of the college day, the professional environment at the UTC prepares our students for the world of work.

Scan the QR code to see UTC Leeds in action!

"They do treat you like adults. We had to do the work and the deadlines were sometimes tight, but that's good, it makes you work harder."

– Shaan B, Previous Student

"Being at the UTC is more like being at work. They treat you like young adults and they have expert teachers."

– Rosanna O, Previous Student


UTC LEEDS

Studying at UTC Leeds

Employability Skills

At UTC Leeds, we have identified a number of key skills we want our students to develop to make them highly employable when they leave the UTC.

These are:

- Self-Management & Organisation
- Teamwork & Collaboration
- Technical Confidence & Skills
- Enquiry & Analysis
- Problem Solving & Resilience
- Creativity & Ingenuity
- Leadership & Management

Our Future Engineers Manifesto

Alongside our employability skills, we also aim to:

1. Create Future Engineers who understand the **transformative** and **enhancing** capabilities of engineering.
2. Create Future Engineers who have been exposed to **industry,** with an understanding of how industry works and how to conduct themselves in those environments.
3. Develop Future Engineers who favour **simplicity** and **impact** over convoluted approaches and unnecessary complexity.
4. Produce **collaborative, conscientious** Future Engineers who have the ability to learn and gain inspiration from the people and places around them.
5. Generate **progressive** Future Engineers who have a raised awareness of new and developing technologies and their potential impact on society.
6. Develop **critically reflective** Future Engineers who are not afraid to challenge their environments and question the status quo.

> **"At UTC you will find your tribe. It's great to be around like minded people who genuinely have the same interests as you"**
>
> *– Millie, UTC Alumni*

What do we Offer?

Level 3 Qualifications (GCEs, A Levels, T Levels and Technical Awards)

At UTC Leeds, we offer the only blended learning option in the city. This means that students can combine pure A Levels with Technical Qualifications in one timetable.

We recommend that students complete a maximum of 3.5 qualifications in their time with us although a very small number of students may take 4 subjects.

See below for the list of subjects we offer along with their subject equivalence and entry requirements.

Technical Qualifications

Subject	Subject Equivalence	GCSE Entry Requirements	Subject Description Page
Single Engineering	1	Grade 5 or above in English & Maths	30
Double Engineering	2	Grade 5 or above in English & Maths	30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A Levels (2 Years) & AS Levels (1 Year)

Subject	Subject Equivalence	GCSE Entry Requirements	Subject Description Page
Biology	1	Grade 6 in Science/GCSE Biology	22
Chemistry	1	Grade 6 in Science/GCSE Chemistry	25
Computer Science	1	Grade 6 in Computer Science/Maths	26
Core Maths (AS Level Equivalent)	0.5	Grade 5 in Maths	28
3D Art & Design	1	Grade 5 in English & Maths	29
Further Maths (must be taken in addition to A Level Maths)	1	Grade 7 in Maths	37
Geography	1	Grade 6 in Geography	38
Mathematics	1	Grade 6 in Maths	40
Physics	1	Grade 6 in Science/GCSE Physics And at least a grade 5 in GCSE Maths	43

Others

Subject	Subject Equivalence	Qualification Type	GCSE Entry Requirements	Subject Description Page
PEO	1	Level 2 NVQ	Grade 3 in English and Maths GCSE	42

T Levels

Subject	Subject Equivalence	GCSE Entry Requirements	Subject Description Page
Craft and Design T Level	3	Level 4 GCSE Math's / English	23
Digital Software Development T Level	3	5 GCSEs including English and Maths at Grade 4 or above and studied GCSE Computer Science achieving a Grade 4 or above	31
Digital Support & Security T Level	3	5 GCSEs including English and Maths at Grade 4 or above	33
Engineering T Level - Design Development for Engineering & Manufacturing	3	5 GCSEs including English and Maths at Grade 4 or above	35
Engineering T Level - Engineering, Manufacturing , Processing & Control	3	5 GCSEs including English and Maths at Grade 4 or above	36
Science T Level	3	5 GCSE's including English and Maths at or above Grade 4	39

What Are T Levels?

T Levels are a 2-year qualification designed to give you a head start towards the career you want.

The government has created T Levels to offer world-class technical education and give you a new option after GCSEs.

T Levels are perfect if you've finished your GCSEs and want to gain the knowledge and experience to:

- Start a job
- Begin an apprenticeship
- Or continue to higher education

T Levels are an alternative to A Levels, apprenticeships, and other 16 to 19 courses. Each T Level is equivalent in size to three A Levels and focuses on vocational skills that employers really need.

How Do T Levels Work?

80% of your time is spent in college, learning the skills employers want.

20% of your time is a valuable industry placement lasting at least 45 days, giving you real work experience.

This work placement helps you put your skills into action and gives employers a chance to see new talent early.

Find out more at www.tlevels.gov.uk/

Recognition and Benefits

- T Levels are nationally recognized qualifications.
- They carry the same UCAS points as three A Levels.
- Universities accept T Levels just like A Levels.
- There are no tuition fees to study T Levels if you start before you turn 19.

Designed with Industry Experts

Over 250 leading businesses—including Fujitsu and Skanska—helped design T Levels. This means you can trust that your T Level will prepare you with the right knowledge and skills for your future career.

After You Finish

When you pass your T Level, you'll receive a nationally recognized certificate showing your overall grade—Pass, Merit, Distinction, or Distinction*. The certificate will also detail what you've learned, helping you move into skilled work or a higher apprenticeship.

Other Level 3 qualifications cannot be taken alongside T Levels because they are the equivalent to three A Levels. You will be able to go to university after studying a T Level. T Levels will award students with UCAS points, shown below.

- 168 UCAS points for a Distinction*
- 144 UCAS points for a Distinction
- 120 UCAS points for a Merit
- 96 UCAS points for a Pass (C)
- 72 UCAS points for a Pass (D or E)

What Can You Do After T Levels?
T Levels are a practical alternative to A Levels, designed with direct input from employers. They include a substantial work placement, giving you hands-on experience in a real job role. This not only helps you decide on a future career but also gives you the skills employers are looking for.

University Pathway
Just like A Levels, T Level grades are converted into UCAS points. These points can be used to apply for undergraduate degrees at university. To find out how many UCAS points you'll need for your chosen course, check the university's website or prospectus.

Apprenticeships and Work
Studying a T Level can also lead straight into the world of work. Many of our students progress into high-level and degree-level apprenticeships after completing their T Levels — just as many A Level students do. Thanks to the strong practical element and real-world experience built into the course, you'll be well-prepared for both employment and further study.

Subjects

Biology A Level

A Level Biology gives students the opportunity to study all living things on both small and large scales. When looking at the data generated from practicals, students use their mathematical skills to perform statistical analysis to help them evaluate their findings.

Careers in Biology are diverse, from the lab-based careers, such as those in genealogy and the food sciences, to those based in the field, such as environmentalists, and those who study animal behaviour. There are links with A Level Chemistry when students cover the bonding in biological molecules. The subject also links well with Computer Science and Engineering for those who want to have careers looking at prosthetic limbs and biomechanics.

Students will cover the following topics:

Year 12

- Biological Models
- Cells
- Organisms exchange substances with their environment
- Genetic information, variation and relationships between organisms

Year 13

- Energy transfers in and between organisms
- Organisms respond to changes in their internal and external environments
- Genetics, populations, evolution and ecosystems
- The control of gene expression

A separate endorsement of practical skills will be taken alongside the A Level. This will be assessed by teachers and will be based on direct observation of students' competency in a range of skills that are not assessable in written exams.

Craft and Design T Level

Exam board: Pearsons

Who is this course for?

A T Level in Craft and Design is aimed at students aged 16-18, after their GCSEs, who are interested in starting a career in the craft and design sector and want a practical, hands-on qualification combining classroom learning with an industry placement. The course is designed to provide the skills and knowledge needed for skilled employment in the area of furniture making and to serve as a pathway to higher education or specialized apprenticeships.

Entry requirements

Level 4 GCSE Math's / English

How will the course be delivered:

The T level is a two-year technical study programme designed with employers to give you the skills that industry needs.

1. Core component

This component covers the underpinning knowledge, concepts and skills that support threshold competence in the craft and design industry.

2. Occupational Specialism component

The occupational specialism is a skills related, practical project that equals 70% of your total qualification.

An industry placement of 315 hours in the relevant industry or occupation (throughout)

What will you study?

This course focuses on building your knowledge and skills for working within the furniture design and manufacturing sectors. The core content that will be covered will include:

- The generation of initial ideas in response to the design brief
- The experimentation with materials and finishes to realise the objectives of the design brief
- The development of ideas by assessing their suitability for purpose
- Use hand and machine tools safely to experiment with materials
- The creative industry
- research, and planning
- component creation
- construction techniques like cutting and joining.

Engineering OCR Level 3 Cambridge Technical Extended Certificate / Diploma

This qualification is designed for learners aged 16-19 years old wanting to specialise in the engineering sector. It will enable them to undertake further study in Engineering or to proceed into engineering-related apprenticeships or employment.

Studied over two years, the OCR Cambridge Technical in Engineering provides you with an exciting opportunity to create engineered products using industrial production processes, technologies and practice that will give you a comprehensive overview of the skills required to be successful working in the engineering sector. The course provides you with practical skills that transfer into the workplace, with units supported by key partners such as Braime 4D, Siemens, Brandon Medical, Leeds Welding Company, ActionPlas and both Bradford and Teesside Universities.

Unit choices cover a range of design, manufacturing and electrical tasks in order to develop your skills across the engineering sector. You will be working in specialist workshops equipped with cutting, welding and CAD/CAM machinery. You will learn how to use them independently to complete controlled assessment units.

A large number of units are controlled assessment which involves producing practical outcomes in the workshops and/or writing technical reports. All controlled assessments will be internally assessed and standardised by a visiting moderator. There are four examined units that are externally assessed as an exam as part of the course.

Chemistry A Level

A Level Chemistry is a highly regarded and useful qualification for Higher Education and employment in a wide range of areas. Success with A level Chemistry will prepare you for a future in chemistry, pharmacology, chemical engineering, biochemistry, biomedical sciences, medicine and dentistry and many more.

A Level Chemistry fits well with studying Engineering because the behaviour of materials, and which one you would select for which use, is determined by the chemistry of those materials. We also look at biological molecules which would enhance the study of A Level Biology. As a Physical Science, Chemistry also compliments A Level Physics and the maths skills used in Physics transfer to Chemistry.

Year 12

- Atomic Structure
- Bonding
- Energetics and rates of reaction
- Equilibrium
- Group 2 and 7
- Basic Organic Chemistry

Year 13

- Thermodynamics
- Further Rates of Reaction and Equilibrium
- Period 3 elements and their oxides
- Transition metal chemistry
- Further Organic Chemistry
- Organic Synthesis and Analysis

A separate endorsement of practical skills will be taken alongside the A Level. This will be assessed by teachers and will be based on direct observation of students' competency in a range of skills that are not assessable in written exams.

Computer Science A Level

Students learn how to think about problems in such a way that they can be potentially solved using an algorithm, how to write algorithms and how to program a computer to automate them. They learn how to write reliable and efficient code using the industry standards followed by software engineers. Although students will have the opportunity to become specifically proficient in the use of particular programming languages, which are prolific in the software development industry, first and foremost students learn to think algorithmically and develop generic programming principles that transcend all languages.

Who is this course for?

- Students who want to study several A Level subjects, such as Computer Science along with Maths and Engineering and/or Physics, and who are open to progressing directly into employment or going to university after finishing their college studies.
- Students who enjoy intellectual challenge and want to study an A Level course that is academically rigorous will be most likely to succeed.

UTC Leeds students who achieve a good grade in A Level Computer Science have skills directly relevant to software development job roles and are very well prepared to undertake a degree in Computer Science or Software Engineering.

Year 12

At UTC Leeds, students in Year 12 learn the C# programming language. As our GCSE students learnt the Visual Basic programming language, students who join us who have learnt Python at their previous school are able to start their learning journey alongside our existing students – with C# as a new language for everyone in September!

In Year 12 you will learn the theory of:

- How computers represent different types of data as binary numbers and the core programming concepts of selection, iteration and subroutines
- Handling text and binary files and encryption techniques.
- The internal hardware components of a computer system and the fundamentals of digital electronics – logic gates and Boolean algebra.
- Inter-networking computer systems including the software and hardware components.
- Low-level programming (assembly language) based on the ARM-processor instruction set.

This theory will be underpinned throughout the course by practical programming tasks - every aspect of the course is taught by writing and testing C# code (not pseudocode).

Year 13

Students will extend their knowledge of programming through the procedural paradigm into object-orientation, still using the C# language, and will also learn functional programming using Haskell. SQL scripting skills will be learnt alongside the theory of database modelling techniques.

Advanced computational theory, including:

- Data modelling and back-end / front-end application development
- Theory and notation used to compare the efficiency of algorithms
- Recursive programming
- Abstract data types such as graphs and trees
- Graph traversal and Dijkstra's algorithm
- Object-oriented programming techniques including inheritance and polymorphism
- Digital electronics including the construction of binary adder and counter circuits.
- Binary floating point representation

You will undertake a substantial project throughout the entire second year (weighted 20% of final A Level grade), which will involve the development of a bespoke application for a real-world context. Possible examples include a business application, an original educational computer game or a simulation of a mathematical or scientific principle. Students will devise their own project brief based on individual skills and interests. With the AQA specification, more than half of the project marks will be awarded for the coding of the final application, the rest of the marks coming from the supporting written report.

Achieving this A Level qualification will provide several progression options. These include:

• With its emphasis on abstract thinking, problem-solving, mathematical reasoning, and software engineering principles, Computer Science is an excellent foundation for the higher study of any STEM-based degree course.
• Level 3 Apprenticeship in Software Development.

Core Maths

Level 3 Certificate in Mathematical Studies

The course is aimed at students who have achieved a grade 4 or above in GCSE. It incorporates real-life situations like calculating tax and National Insurance along with modelling situations using maths. Graphs, charts, statistics, percentages and other higher GCSE topics are used throughout. There are two exams which include the following topics. The exams are taken in May and June of Year 12.

Examination 1 :

Analysis of data - collecting and sampling data, representing data and understanding data. A useful tool for many different career paths.

Maths for Personal Finance – Extremely useful for all this area of the course teaches you to apply percentages and numerical calculations to interest rates, mortgages, student loans taxation and financial management.

Estimation – Modelling and Fermi estimation, both useful for real world applications.

Critical analysis of given data and models (including spreadsheets and tabular data) – Teaches you to present logical and reasoned arguments in context but communicating alongside mathematical approaches.

Examination 2 :

Critical Path Analysis – The study of activity networks, algorithms and project management. This has links to both Engineering and Computer Science and teaches you to map out projects, calculate early and late start times, analyse and evaluate the impact of a variety of scenarios.

Expectation – The study of probability and calculating the expected value of real-world situations.

Cost benefit analysis - Analysing data and making decisions, weighing up the risk. This area of mathematics is highly beneficial to project management.

3D Design (Art and Design) A Level

A Level 3D Design is an exciting and hands-on course that focuses on designing and creating three-dimensional objects and spaces. Students explore a wide range of materials and techniques—such as wood, metal, plastics, and digital technologies—to develop innovative and functional designs. The course covers areas such as product design, furniture, architecture, interior design, and sculpture, encouraging students to think critically and creatively about form, function, and aesthetics.

This course is perfect for students who enjoy working practically, have a strong visual sense, and are interested in the built environment or physical products. Whether you're aiming for a future in architecture, product design, interior design, or the creative industries more broadly, 3D Design offers a solid foundation in both technical skill and creative thinking.

Students must show knowledge and understanding of:

- relevant materials, processes, technologies and resources
- how ideas, feelings and meanings can be conveyed and interpreted in images and artefacts created in the context of their chosen area(s) of three-dimensional design
- historical and contemporary developments and different styles and genres
- how images and artefacts relate to social, environmental, cultural and/or ethical contexts, and to the time and place in which they were created
- continuity and change in different styles, genres and traditions relevant to three-dimensional design
- a working vocabulary and specialist terminology that is relevant to their chosen area(s) of three-dimensional design.

Component 1: Personal Investigation

What's assessed

Personal Investigation - 7201/C, 7202/C, 7203/C, 7204/C, 7205/C, 7206/C

Assessed

- No time limit
- 96 marks
- 60% of A-level

Non-exam assessment (NEA) set and marked by the centre and moderated by AQA during a visit to the centre.

Visits will normally take place in June.

Component 2: Externally Set Assignment

What's assessed

Response to externally set assignment - 7201/X, 7202/X, 7203/X, 7204/X, 7205/X, 7206/X

Assessed

- Preparatory period + 15 hours supervised time
- 96 marks
- 40% of A-level

Non-exam assessment (NEA) set AQA, marked by the centre and moderated by AQA during a visit to the centre.

Visits will normally take place in June.

Digital Software Development T Level

Exam board: Pearson

Course overview

T Levels are new qualifications that follow GCSEs and are equivalent to studying three A Levels. For students who take this course – it will be your entire timetable for 2 years! T Levels combine classroom education, practical learning and significant work experience (45 days).

The main programming language taught on this course is Python, but you will also learn object-oriented programming principles using C# and will learn client-side scripting using JavaScript embedded with HTML5 and CSS. You will also learn SQL scripting and data modelling techniques, using SQL Server and cloud-based Azure Services.

You will learn the core knowledge that underpins the digital sector and develop occupationally specific skills that will prepare you to enter skilled employment within a specific related job role. Networking and Cyber Security will be a significant focus of your studies alongside software development and testing techniques, and you will also study the industry certification CompTIA N+.

This technical qualification has been developed in collaboration with employers, so the content meets the needs of industry and prepares you for work.

Who is this course for?

It is ideal if you are intending to progress directly to employment within the digital production, design and development sector, in roles such as programmer or Software Development Technician. It will provide the knowledge and experience needed to open the door to skilled employment or an apprenticeship.

Entry requirements

5 GCSEs with English and Maths at or above grade 4.

UTC Leeds have established relationships with local employers who are looking to build a talent pipeline of young people to recruit into their organisation with the experience, knowledge and skills to add value to the organisation from the day they leave college!

What does the course cover?

The core component will be assessed by two exams and an employer-set project. The core component provides a broad understanding of the digital industry and covers the following topics:

- Culture
- Data
- Digital Environments
- Legislation
- Security
- Testing and Tools

Your occupational specialism will allow you to develop the relevant skills in preparation for your career in the digital sector. The occupational specialism is assessed by a project that is created in conjunction with employers. The content covers the following topics:

- Analysing a problem to define requirements and acceptance criteria aligned to user needs
- Designing, implementing, and testing software
- Changing, maintaining and supporting software
- Creating solutions in a social and collaborative environment
- Applying ethical principles and managing risks in line with legal and regulatory requirements

As part of this Technical Qualification, you will also enhance your broader skills in literacy and numeracy. In addition, you will develop transferable technical and practical skills in communication (working with colleagues, customers, and clients), research and project work.

What could this qualification lead to?

Achieving this T Level qualification will provide several progression options. These include skilled employment in digital sector roles, such as:

- Programmer
- IT Business Analyst
- Systems Designer
- Web Designer
- Software Development Technician

Digital Support & Security T Level

Exam board: NCFE

Course overview

This is a two-year course, equivalent to 3 A Levels and it includes a minimum of 45 days work experience in industry.

T Level courses are designed in partnership with employers and businesses, ensuring the content aligns with industry needs and effectively prepares you for the workplace. T levels provide the knowledge and experience necessary to pursue highly skilled employment, apprenticeships, or advanced studies, including university degrees.

Throughout this two-year program, you will gain essential knowledge that forms the foundation of the digital support industry. You will also develop specialised skills that prepare you for employment in roles such as digital support technician, digital applications technician, digital service technician, infrastructure technician, IT solutions technician, or in hardware and software solutions.

Who is this course for?

Students interested in pursuing a careering network infrastructure, network support, network administration or cloud technology industries.

Entry requirements

5 GCSEs including English and Maths at or above grade 4 and a passion for computers, networks and cloud technologies.

What could this qualification lead to?

Apprenticeships in many IT support-related fields
Apprenticeships in Cloud Technologies
Apprenticeships in Network or cloud administration

Direct employment in junior roles in IT support, cloud technologies.

Degree courses in many IT-related fields.

What they will cover

Year 12

You will study a variety of academic areas of knowledge such as data, legislation, digital environments, data analysis , business context and security. Technical knowledge will also be taught and developed around technical fault finding, communication with stakeholders, resolution of faults and testing of solutions all within set scenarios.

Year 13

In the occupational specialism of “Digital Infrastructure” you will learn and develop technical skills in Digital Security controls and procedures as well as deployment and management of physical and virtual infrastructure.

Courses

The two most popular Level 3 Engineering courses available at UTC Leeds are:

- The Extended Certificate (Single) is aimed at learners who wish to enter prestigious higher education establishments and must be studied with two full A level courses. This is the equivalent of one A level.
- The Technical Diploma (Double) aimed at learners who would like to enter the profession as a higher-level apprentice. This course also allows the study of a single A level and can also be used to access higher education courses. This is the equivalent of two A levels.

What do the units look like?

Example Coursework unit - Unit 17 Computer Aided Manufacture (CAM).

Many companies which make products are reliant on computer systems to run the manufacturing processes involved. This is known as Computer Aided Manufacturing (CAM). Working from a brief from a local CNC polymers manufacturing firm. The aim of this unit is for you to understand how CAM systems are used within manufacturing and be able to program and use Computer Numerical Control (CNC) machines (Vertical Milling) to produce components. You will also learn to produce components using additive manufacturing techniques (3D printing).

Example Examined unit - Unit 3 Principles of Mechanical Engineering.

All machines and structures are constructed using the principles of mechanical engineering. Machines are made up of components and mechanisms working in combination. Engineers need to understand the principles that govern the behaviour of these components and mechanisms.

What could an Engineering qualification lead to?

As part of an academic study programme, this qualification could also form part of the learner's basis for application to a Higher Education course in Engineering, alongside complementary subjects, such as A Level in Maths and/or Physics or other applied qualifications.

It is also a gateway to level 3 and 4 apprenticeships. Entry Requirements 5 GCSEs at grade 4 or above including English, Mathematics and Science. A grade 6 or above are required to study an A Level (Maths/Science) alongside the technical qualification.

Engineering T Level - Design Development for Engineering & Manufacturing

Exam board: City and Guilds

This qualification is aimed at students who want to have the best grounding for a career in engineering. It will give them a broad range of knowledge and skills in academic and technical subjects. It is ideal for students who want to proceed with an apprenticeship while still allowing access to further study. It has been designed to make the student more employable, giving them the skills that employers want and need in the workplace.

Year 12

In Year 12 students will cover numerous subjects which will be assessed over two exams while working on an industrial set project.

The subjects could include mechatronics, engineering and manufacturing control systems, mechanical principles, electrical and electronic principles, working within the engineering and manufacturing sectors, and much, much more.

While learning the above, will be expected to work on an industrially set brief, researching and designing at a high technical level to develop a desired outcome.

Year 13

In Year 13, students will be working towards and completing a level 3 engineering qualification, working towards a specific engineering occupational specialism. This will prepare them for the world of work and give them the skills needed to progress in their academic or professional path of choice.

While working on the above students will be expected to attend 45 full days in industry, applying their learnt skills and gaining experience which will help them in their next step.

T Levels are new courses which follow GCSEs and are equivalent to 3 A levels. These 2-year courses, which launched September 2020, have been developed in collaboration with employers and businesses so that the content meets the needs of industry and prepares students for work, further training or study.

T Levels offer students a mixture of classroom learning and ‘on-the-job’ experience during an industry placement of at least 315 hours (approximately 45 days).

Engineering T Level - Engineering, Manufacturing, Processing & Control

Exam board: City and Guilds

This is a two-year course equivalent to 3 A Levels. It includes a minimum of 45 days work experience in industry, students will study and practice machining processes, material science and acquire an understanding of mathematics including standard matrices and determinants and standard trigonometry. Further to this, students will specialise in Machining and Toolmaking technologies.

Who is this course for?

This course will suit a student wishing to take employment or a higher apprenticeship in the following manufacturing roles and sectors; working as a mechanical engineering technician, CNC operator setter, toolmaking, aerospace engineering technician and power engineering.

Entry Requirements

5 GCSEs including English and Maths at or above grade 4.

What will you study?

Some of the scientific concepts you will study are:

This course focuses on building your skills and knowledge for working within engineering manufacturing. The core content that will be covered will include:

- Processes of production and manufacturing
- Material science
- Electronics
- Mechanical engineering
- Maths and science for engineers
- Engineering drawing and the use of CAD and CNC
- Specialist machinery utilised in the production and manufacturing environments
- Product and project management
- Quality assurance and quality control
- Machining and toolmaking technologies
- Employer-set projects

How will the course be delivered?

This T level is a two-year technical study programme designed with employers to give you the skills that industry needs. Technical knowledge and in Engineering, Manufacturing, Processing and Control

- **Year 1: Engineering Core**
- **Year 2: Occupational Specialism (Machining and toolmaking technologies)**

An industry placement of 315 hours in the relevant industry or occupation (throughout)
Relevant maths, science, English and digital skills will be embedded throughout the course.

Further Maths A Level

Further Mathematics is an extension of A Level Mathematics. It is a course for you if you thoroughly enjoy Mathematics and want to understand further mathematical processes as well as extending your skills and techniques. Students who study Further Maths have a high enjoyment of Mathematical methods and want to be challenged beyond the standard A Level. Further Maths often boosts students' understanding of A Level Mathematics and distinguishes them as able Mathematicians. Certainly, if you are thinking of studying a degree with a high Mathematical content then Further Maths will be advantageous.

The course will help you to understand coherence and progression in mathematics and how different areas of mathematics are connected, apply mathematics in other fields of study and be aware of the relevance of mathematics to the world of work and to situations in society in general, use their mathematical knowledge to make logical and reasoned decisions in solving problems both within pure mathematics and in a variety of contexts, and communicate the mathematical rationale for these decisions clearly.

Students are taught the AS Further Maths alongside their study of the A Level Maths during Year 12. There are two compulsory exams, Core Pure 1 and Core Pure 2. Two further exams are chosen, depending upon the strengths of the group.

The compulsory modules include the following topics:

- Proof
- Complex numbers
- Matrices
- Further algebra and functions
- Further calculus
- Further vectors
- Polar coordinates
- Hyperbolic functions
- Differential equations

Geography A Level

Why Study A Level Geography?
A Level Geography at UTC Leeds is a dynamic and engaging subject that deepens your understanding of the major changes shaping our planet. From climate change to resource consumption and global inequalities, Geography challenges you to think critically about how we can create a more sustainable and equitable future—locally, nationally, and globally. Our passionate Geography team is committed to inspiring students to become innovative problem-solvers who can make a real difference.

What Will You Learn?
Building on your GCSE knowledge, A Level Geography revisits key topics like natural hazards, coastal systems, landscapes, and urban environments. You'll also explore new themes such as:

The water and carbon cycles and their interaction with human activity

How places change over time

The global systems driving globalization

This course integrates your science background and maths skills, especially through statistical analysis. Essay writing is a key component, helping you develop strong reasoning and communication skills—valuable for both university and employment.

Coursework and Exams
You will undertake an independent investigation as part of the Non-Examined Assessment (NEA), worth 20% of your final grade. This project lets you design, conduct, and report your own research, developing essential skills like self-management, enquiry, and analysis—qualities highly regarded by universities and employers.

The remaining 80% of your grade comes from two terminal exams:

Physical Geography (2 hours 30 minutes)

Human Geography (2 hours 30 minutes)

How Does Geography Fit at UTC Leeds?
A Level Geography is an academic qualification that complements other similar subjects and balances practical courses offered at UTC Leeds. Fieldwork is an important and exciting part of the course, with regular opportunities for hands-on learning throughout the year.

Science T Level

Exam board: NCFE

Are you curious about how science shapes the world around us? Our T Level Science course combines classroom learning with real industry experience, giving you the skills and knowledge to jumpstart a career in science, technology, healthcare, or engineering. You'll work on exciting projects, develop practical skills, and build connections with leading employers, preparing you for the future job market.

Industry Connections and Employability Skills are at the heart of this course, ensuring you gain valuable experience and the qualities employers are looking for.

Who is the course for?

This course is perfect for students who have completed their GCSEs and want a hands-on, practical approach to science. If you're interested in learning how science works in the real world and want to prepare for a career, apprenticeship, or university, T Level Science is the right choice for you.

Entry Requirements

5 GCSEs including English and Maths at or above Grade 4.

What could this qualification lead to?

Forensic Scientist

Research Scientist

Laboratory Technician

Employment (Roles with Laboratory Settings in Science)

Higher education (University/HNC)

Apprenticeship

What will you study?

Some of the scientific concepts you will study are:

- Cells, tissues, and biological molecules
- Genetics
- Microbiology and immunology
- Materials and chemical properties
- Chemical reactions including analysis
- Electricity and magnetism
- Waves and radiation

You will also develop your knowledge and understanding in the following areas:

- Working within the health and science sector
- Health, safety and environmental regulations
- Data handling and processing
- Good scientific and clinical practice
- Experimental equipment and techniques
- Core science concepts
- Project management

The occupational specialism, Laboratory Sciences will allow you to:

- Perform a range of appropriate scientific techniques to collect experimental data in a laboratory setting, complying with regulations and requirements
- Plan, review, implement and suggest improvements to scientific tasks relevant to a laboratory setting
- Identify and resolve issues with scientific equipment or data errors

Mathematics A Level

Students will need to have achieved a minimum of a grade 6 at GCSE to start the A level course.

Mathematical and statistical problem solving, data analysis and interpretation skills are all developed through the study of A level Maths and are considered valuable in a broad range of subject areas. Mathematics at A Level is a prerequisite for a huge number of degrees as well as apprenticeships.

If you enjoy problem solving, algebraic methods and interpreting graphs then Mathematics could be the course for you. By choosing to study Mathematics you will build on your GCSE knowledge in greater depth, as well as delving into understanding key mathematical principles which will enable you to construct and articulate mathematical arguments.

The course is assessed through three examinations, two of which are Pure Maths, which consists of some of the following topic areas:

- Algebraic Expressions & Methods, Co-ordinate Geometry, Functions, Graphs & Transformations, Sequences & Series, Binomial Expansion – these topics give you the skills to delve into both abstract and real-life problems.
- Trigonometric Ratios, Identities, Functions & Modelling – Trigonometry is a powerful tool with a wide range of applications which will be considered within the mathematics course but also within other STEM subjects.
- Exponentials & Logarithms – modelling exponential growth has links to interest rates, population growth, viral infections etc.
- Differentiation & Integration – Calculus is a powerful tool which we will introduce you to in A Level Mathematics, it allows us to look at the rate of change of real-world problems.

The third exam is Statistics and Mechanics-based and includes questions from:

Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions, Statistical hypothesis testing, Quantities and units in mechanics, Kinematics, Forces and Newton's laws, Moments. Statistics topics allow you to interpret data and form conclusions using facts and figures. Mechanics has many links to Physics and is the study of forces and movement in both applied and theoretical applications.

PEO Level 2 NVQ

The Level 2 PEO (Performing Engineering Operations) courses are designed to prepare students for an engineering apprenticeship or to follow on with a Level 3 course in Engineering.

PEO is recognised by all apprenticeship providers and employers as a national benchmark for competency in the engineering industry.

The course will enable you to:

- Learn practical skills and gain a relevant industry standard qualification.
- Access workplace experience with companies in the form of site visits.
- Experience development sessions and careers advice as part of our wider 6th form offer.
- Re-sit English and/or Maths GCSEs.

The qualification is a National Vocational Qualification (NVQ) that involves the skills and knowledge to work in an engineering environment. The NVQs are based on national occupational standards, which you must meet to be competent in each module of work.

The L2 PEO (Performing Engineering Operations) course is a full-time qualification studied over 5 days, which is designed to prepare students for an engineering apprenticeship or to follow on with a Level 3 course in Engineering. It is recognised by all apprenticeship providers and employers as a national benchmark for competency in the Engineering industry.

L2 students will need to achieve a minimum of a Grade 3 or above in English and Maths GCSE – this is to allow you to access the theoretical side of the course and be successful in the written assignments. GCSE resits can be studied alongside this course.

L2 students will study 15 hours with industry specialist engineering staff.

PEO Mechanical Engineering Route

All students will cover the fundamental skills and knowledge common to all engineering practices in the three mandatory units. These Mandatory units are:

- Safe working practices.
- Carrying out engineering activities.
- Communicating technical information.

ME students will then cover a minimum of 3 additional assessment units in the following practices:

- Producing components using bench fitting techniques.
- Preparing and using lathes for turning operations.
- Producing mechanical engineering drawings using a CAD system.

Assessment

All units are assessed against set criteria. There is a holistic approach to assessment which involves a portfolio of evidence, witness testimonies and verbal questioning to measure knowledge and understanding of key principles. Students must complete underpinning knowledge questions at the end of each unit (25-30 questions) as well as manufacture all parts within tolerance.

Expectations

The following expectations are fundamental to the success of any student enrolling on this course:

- A minimum of 95% attendance to taught lessons (not including authorised absence).
- A good attitude to work, peers and staff – workplace skills of good or better on all reports.
- Keeping up to date with all work set – your work will be assessed regularly and you will be given feedback on how you can improve.
- Being proactive to seek advice and guidance if you are struggling with any aspect of the course.

There will be a probationary period of 6 weeks, after which your attitude to continue the course will be assessed.

Physics A Level

A level Physics is a highly valued qualification which allows you to develop and demonstrate your skills in problem solving, logical thinking and analysis. It is a solid foundation for many higher education subjects, leading to a diverse range of careers, for example biomedical physicist, astrophysicist, nuclear physicist, engineer, sound engineer, teacher or meteorologist.

A strong foundation in maths is essential for success in Physics A level, as physics provides opportunities to use mathematical techniques to solve problems. Physics also underpins some of the Chemistry subject content, for example how gases respond to changes in temperature and pressure. There is also significant crossover with Engineering, which relies on physics theory to make things work in real life!

Year 12

- Measurements and their errors
- Particles and radiation
- Waves
- Mechanics and materials

Year 13

- Further mechanics and
- thermal physics
- Fields and their consequences
- Nuclear physics

Option Topic

(Students currently get to vote for which option they would like to select)

- Turning Points in Physics
- Engineering physics
- Medical physics
- Electronics
- Astrophysics

A separate endorsement of practical skills will be taken alongside the A Level. This will be assessed by teachers and will be based on direct observation of students' competency in a range of skills that are not assessable in written exams.

Student Experience

Why choose UTC Leeds?

"I've always enjoyed taking things apart and putting them back together – so coming here just made sense! My old school didn't offer the same level of product design or engineering." – *James, Y11 Graduate*

"It felt like a better choice than my old school because they only offered one class for Design and Technology and all the equipment was out of date. The UTC is a good school for the engineering side and a good school overall." – ***Harry, Y11 Graduate***

What's it like to study here?

"I walked in and it just felt right. I liked all the Engineering facilities and the general vibe of the place. It's just great, they're all very lovely here." ***– Eloisa, Y13 Graduate***

"Because it's a small school everyone is like a family." ***– Rosanna, Y11 Graduate***

What's the best thing about UTC Leeds?

"The greatest thing about the UTC is that you're not just learning about how to programme something, you're actually programming it, then using it." – *Daniel, Y13 Graduate*

"The amount of equipment in this college is second to none. I have never seen as much anywhere else." ***– Callum, Y13 Graduate***

Scan the QR code to hear more from our students!

Parent Voice

PARENT VOICE

Our daughter is really enjoying it – like a different kid.
Thank you for the change you have helped her make, allowing her to be her true self.

PARENT VOICE

He never used to speak about school but has started to come home with stories and he is really enjoying it!

PARENT VOICE

Our son loves Computing and the fact he is now being challenged in all of his lessons.
UTC Leeds has handled the transition really well.

PARENT VOICE

Joining UTC has been a big adjustment but our daughter is absolutely loving it!
She seems happy, is enjoying her courses and has made new friends.

Pathways After KS5

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 continuing professional development.

At every stage of your journey with us, you will have access to independent advice and guidance to help you choose the right pathway for you.

Post-18 Options

- **University**
  Did you know that there are over 100 universities in the UK? Where you can go will depend on the degree you want to study, and the Level 3 qualifications you hold. Studying at university allows you to gain a more in-depth understanding of your subject through lectures and seminars.

- **Higher Apprenticeships**
  Higher Apprenticeships are equivalent to Foundation Degrees. Similarly to Advanced Apprenticeships, they allow you to spend most of your time in a work setting, with some time in an education setting.

- **Degree Apprenticeships**
  A Degree Apprenticeship allows you to combine having a job with a university degree. At the end you will (most of the time) gain an undergraduate or postgraduate degree, as well as a wealth of work experience.

- **Employment**
  Of course, you don't have to stay in any form of formal education after 18. For more information and support in launching your career, visit https://bit.ly/UTCKS5_Careers

Apply now!

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UTC Leeds admits students into Year 10 and Year 12.

Please complete an application form on
https://bit.ly/KS5Prospectus
or contact the admissions team on **0113 353 0140.**

Interested but want to know more?

Check out our virtual tour at utcleeds.co.uk/virtual-tour and look out for upcoming Open Events. To stay up to date, follow us **@UTCLeeds!**

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