



A 14-19 SCIENCE & ENGINEERING
ACADEMY

Sixth Form Course Prospectus

Sixth Form at UTC Warrington

Moving up into Sixth Form is an exciting time. Pursuing courses that reflect your passion and your future destination, you're given more responsibility for your own learning and more freedom throughout the college. Here, you'll have free range of the LRC where you can spend your free periods studying and you'll be given the chance to become more independent, choosing your own business dress and have the opportunity leave the premises during breaks and lunch. Over the two years, there'll be more focus on work experience and your future destination. Working closely with our employer partners, there will be continuous opportunities to get hands on and for students with university on their horizon, we'll be preparing you for university by writing applications and visiting universities.

Entry Requirements

Choosing the right course for you is reflective of your future GCSE grades. Post-16 courses are indisputably much harder than GCSEs, although your passion for your chosen subject gives you the drive to succeed. Entry requirements for each course is detailed further on, but here's a general overview...

- To go on and study A-Levels, you'll need to achieve a Grade 4 or above in Maths and English and a Grade 6 or above in a relevant subject to the desired A-Level.
 - Choosing a BTEC course, you'll need to achieve a Grade 4 or above in Maths. You'll have the opportunity to resit your GCSE English if you have not achieved a Grade 4.
 - Providing students an opportunity to resit their exams if they have not achieved a Grade 4 in both English and Maths, our Pre-Apprenticeship course also gives students the chance to study for a Cambridge Technical in Engineering and go out on work experience for two days a week.
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Application Process

Applying to join UTC Warrington is easy. Head over to our website where you can apply online. Your place will be secured, although the courses you have chosen will be decided on GCSE results day on Thursday 23rd August. We'll be open during the day for Enrolment Day, where you'll need to come in and discuss your results and options with one of our teachers before confirming your place.



Choosing the Right Course for You

At UTC Warrington we have a varied range of academic and technical courses to follow. Whether you want to pick a particular pathway or pick and mix subjects you are passionate about, you can find out more information about each course and the topics you'll discover.

If you're looking to choose a range of A-Levels, you can pick up to four to study, although the minimum requirement for university courses is three. If a BTEC course also takes your fancy, you can choose up to two A-Levels to study alongside it as a BTEC course is equivalent to two A-Levels. As well as these courses, you can choose to pick professional courses to study on the side.

If you're looking to study a BTEC course, you'll also be studying for a qualification in Core Maths and an Extended Project Qualifications and PRINCE2 Project Management.

Pathways

Our pathways have been developed as a guidance for students who have aspirations to succeed within a particular field. Courses have been carefully selected to reflect the skills and understanding employers are looking for. Working closely with employer partners, they also have a keen interest in developing future employees who not only have a keen set of skills in science and engineering but that also have a clear understanding of how business and industries work in the digital and creative world.

Engineering

- BTEC Engineering
 - Specialising in either:
 - Mechanical
 - Electrical and Electronic
 - Aeronautical
 - Manufacture
 - Computer

Science

- Biology
- Chemistry
- Physics
- Computer Science
- Maths
- Geography
- BTEC Applied Science
- Psychology

Creative

- Art and Design (Architecture)
- Product Design
- English
- BTEC ICT
- Psychology
- Media

Digital

- Computer Science
- BTEC ICT
- Product Design
- Maths

Business

- Business Studies
- English
- Geography
- Media
- BTEC ICT
- Psychology

A-Levels

Art & Design

Reasons to Study the Course

Creativity is arguably the most critical ingredient when it comes to many aspects of engineering and design. The ability to see the world from a different perspective is key when it comes to problem solving and developing ideas. It is widely acknowledged that an innovative and imaginative mind-set is crucial to any business and therefore an education within this pathway is full of potential careers and opportunities. The Creative Pathway at UTC Warrington is designed for students who are inquisitive, curious and keen to develop their knowledge and relevant skills to build self-confidence, challenge pre-conceptions and celebrate individuality. UK creative industries generate £87.4bn a year to the UK economy.

Course Content

Over the two years, students will develop their knowledge, skills and understanding of how art and design is utilised within a creative and visual world. All units of work are underpinned by an interest in engineering, architecture and the built environment; this will develop students professional and technical competencies.

Assessment

60% Coursework
40% Exam

Progression

Architect
Games Designer
Design Engineer

Entry Requirements

Grade C or equivalent in Art or the presentation of a portfolio



Biology

Reasons to Study the Course

Biology involves the study of a wide range of exciting topics, ranging from molecular biology to the study of ecosystems and from micro-organisms to mammoths. Biology is never far from the headlines either... The human genome has been sequenced and we know the complete arrangement of the three thousand million bases that make up human DNA. In Kenya 350 people die every day from AIDS and in South East Asia the skies are dark with smoke as the last Bornean rainforests are burned to grow oil palms. Biologists are concerned with all these issues.

Course Content

Developing an appreciation for the diversity of living organisms and an understanding of biological principles, over the two years students will get hands on in the lab and develop core skills. Studying a range of topics covering both theory and practice, students will learn how to investigate, collect data and evaluate it.

Assessment

Twelve practicals and three exams

Progression

Doctor
Zoologist
Forensic Scientist

Entry Requirements

Grade 6 in GCSE
Biology or Dual
Science



A-Levels

Chemistry

Reasons to Study the Course

Chemistry is all around us: it is intrinsically linked to both Physics and Biology, and is vital for our understanding of the Universe. This course will give students the opportunity to develop an understanding of the fundamentals of Chemistry that will be invaluable for further university-level study of subjects such as Biochemistry, Forensic Science, Chemical Engineering, Pharmacy, and Earth and Environmental Science. It is also the only course compulsory for studying medicine. Students will have the chance to undertake practicals in the lab and discover how theory is applied to modern-day technology.

Course Content

As one of the most versatile scientific disciplines, studying chemistry will allow students to delve into the principles of organic, inorganic and physical chemistry. From examining atomic structures to testing acids and bases, there are an abundance of opportunities to complete practicals throughout the course, developing key analytic skills.

Assessment

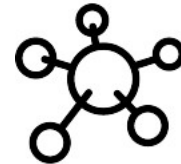
Twelve practicals and three exams

Progression

Pharmacologist
Chemical Engineer
Doctor

Entry Requirements

Grade 6 in GCSE
Chemistry or Dual
Science



Computer Science

Reasons to Study the Course

Computer Science is one of the largest industries worldwide and is one of the fastest growing, as advances in computers continue to develop and transform many aspects of our lives. The A Level computer science course provides students with a broad insight into the structure of computers and how they can be developed to solve everyday problems. Students will gain a detailed understanding of computer programming by studying the Python programming language which will provide them with the skills to develop computer applications to run on a wide range of platforms.

Course Content

Uncovering many crucial areas of how computers and their programs function, students will spend a considerable amount of time looking at computer and network architecture. Developing their written and oral skills, students will discuss the impact that computers have on society and the moral issues associated with computing advancements such as Artificial Intelligence and government surveillance.

Assessment

Two exams and one project

Progression

Software Programmer
Robotic Engineer
Website Developer

Entry Requirements

Grade 6 or above in
Maths and Science



A-Levels

English Language and Literature

Reasons to Study the Course

English Language and Literature offers opportunities for students to develop their subject expertise by engaging creatively, critically and independently with a wide range of texts. Using literary and linguistic concepts and methods, students analyse literary and non-literary texts in a range of modes and genres, in the process gaining insights into the nature of different discourses and ideas about creativity. Students will get the opportunity to develop their verbal and written communication skills through producing and interpreting language by creating texts themselves and critically reflecting on their own processes of production.

Course Content

Discovering the foundational elements of language study, literary theory and creative practice, students will gain an understanding of representation of place, point of view and genre in prose, along with the forms and functions of poetic voice, the role of the individual in society and conflict in drama.

Assessment

Two exams and a piece of coursework

Progression

Journalist
Publisher
Marketing Manager

Entry Requirements

Grade 4 or above in English Literature and Maths



Geography

Reasons to Study the Course

A Level Geography encourages students to apply geographical knowledge, theory and skills to the world around them. In turn, this will enable them to develop a critical understanding of the world's people, places and environments in the 21st century. Developing a knowledge and understanding of contemporary geographical concepts, including climate change and its effect on people and places and the relationship between changing urban environments and quality of life, students will gain valuable transferable skills that will enable them to progress into higher education and a range of employment opportunities.

Course Content

Over the two years, core topics covered in Geography will focus on collecting, presenting and analysing data from the world around us. Studying a range of topics, including stores of water and carbon, tectonic processes and their impact, global governance and geopolitics, students will get the chance to question and tackle present day issues.

Assessment

Two exams and a piece of coursework

Progression

Planning Surveyor
Conversationalist
Logistics Manager

Entry Requirements

Grade 6 or above in GCSE Geography, English and Maths



A-Levels

Maths

Reasons to Study the Course

Delving into the world of numbers, A-Level Maths comprises mainly of pure mathematics with statistics and mechanics. Studying Maths helps us find patterns and structure in our lives, unlocking the mysteries of science, technology and statistics. Having a key sense of mathematical knowledge is essential in the science and engineering industries. Throughout the two years, students will develop their analytical and research skills by focusing on modelling and problem solving while tackling a range of topics. Usually, if students want to study a STEM subject at university, they'll need A-Level Maths under their belt.

Course Content

Over the two years, students will investigate a range of mathematical techniques, including algebra, geometry, trigonometry and calculus, forming a strong understanding of the fundamental building blocks of the subject. Studying statistics and mechanics, including probability, kinematics and Newton's Laws, students will develop the ability to apply a range of mathematical skills to different situations.

Assessment

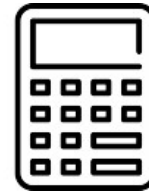
Five Exams over two years

Progression

Accountant
Statistician
Investment Banker

Entry Requirements

Grade 4 or above in Maths



Media Studies

Reasons to Study the Course

The media saturates everything we do in the developed world in the 21st Century. Through studying Media Studies students will be given the tools to view, evaluate and analyse a variety of media products, developing their understanding in how the media pervades their lives. Studying a range of media forms, students will develop strong research and problem-solving skills, as well as their creativity, as they engage with contemporary and diverse topics and content. Through discussion and debates, students will build upon their communication skills as they deliberate contemporary issues from a range of different perspectives.

Course Content

A-Level Media Studies engages students in the in-depth study of media products in relation to the four areas of the theoretical framework; language, representation, the media industries and their audiences. Studying printed and digital media, students will get the chance to get hands on by composing their own pieces.

Assessment

Two exams

Progression

Radio Producer
Editor
Broadcast Engineer

Entry Requirements

Grade C or equivalent in Media Studies and English



A-Levels

Physics

Reasons to Study the Course

So, ask yourself, why should I study physics at A-Level? Hang on a minute, ask yourself, why shouldn't I study Physics at A-Level? Physics is absolutely unique. No other subject allows you to study and understand the way in which the world, and the universe, works in such amazing detail. Through lessons in theory and practicals exploring open-ended, physics-based problems, students will have the opportunity to learn about the more ordinary everyday processes that surround us, as well as the 'extraordinary'. The latter can be explained in a variety of profound, imaginative and beautifully simple means.

Course Content

Over the two years, there are a vast array of fascinating and challenging topics for students to sink their teeth into. From Particles and Radiation, Waves and Optics, to Mechanics and Materials and Nuclear Physics, students will have the option to gain an understanding of Astrophysics, Medical Physics and Electronics.

Assessment

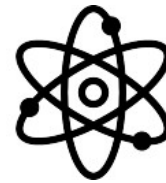
Twelve practicals and three exams

Progression

Geophysicist
Nuclear Engineer
Aerospace Engineer

Entry Requirements

Grade 6 in GCSE
Physics or Dual
Science



Product Design

Reasons to Study the Course

This creative and thought provoking qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a number of careers, especially those in the creative industries. Students will investigate historical, social, cultural, environmental and economic influences on design and technology whilst putting their learning into practice producing products of their choice. This course will enable students to build on the knowledge and skills gained at level 2 engineering. Students will use their creativity and imagination to design and make prototypes that solve real and relevant problems, considering their own and others' needs, wants and values.

Course Content

Discovering an appreciation for the dynamic world around us and that everything is the result of someone making design decisions, the course will delve into design processes. From materials and their performance characteristics to manufacturing industries, over the two years students will develop their ability to be a designer, turning their ideas into creative outputs.

Assessment

One exam and one project

Progression

Product Designer
Automotive Designer
Brand Strategist

Entry Requirements

Grade 4 or above in
English and Maths



A-Levels

Psychology

Reasons to Study the Course

Ever wondered if prison really does change criminal behaviour? Or why some people conform? Or perhaps if the experiences you had before the age of five really do shape the person you are today? Studying Psychology provides students with an understanding of the way people think and why people behave in certain ways. Throughout the course, students will learn a variety of skills including analytical thinking, improved communication, problem solving and many more that will prepare you for an exciting future with the possibility of a range of fantastic careers.

Course Content

Studying Psychology will give students an in-depth knowledge of psychological concepts, including biological psychology, cognitive psychology, developmental psychology, social psychology and individual differences. Over the two years, students will delve into the human mind and behaviour, discussing the current issues and debates within the scientific field.

BTEC Courses

Applied Science (Forensic and Biomedical)

Reasons to Study the Course

For the naturally inquisitive, looking for an exciting and varied platform for a career in Science, studying for a BTEC in Applied Science ticks all the right boxes. Combining hands-on practical work with research based reports, students can choose an array of options to suit their passion. Whether you're a budding Forensic Scientist or an aspiring Medic, choosing to study Applied Science alone or combined with a couple of A-Levels will put you on the right path. Covering all scientific disciplines, Physics, Chemistry and Biology, it will allow students to experience the full breadth of science.

Course Content

Developed to provide the skills and techniques required in the science industry, Applied Science allows students to study vocational subjects and utilise our employer partners off site. Providing students the opportunity to experience the full breadth of science, it helps students identify areas of interest and future specialisms.

Assessment

60% Coursework
40% Exam

Progression

Psychologist
Nurse
HR Advisor

Entry Requirements

Grade 4 or above in
English, Maths and
Science



New
for
2018!

Assessment

Research Based
Reports

Progression

Biomedical Scientist
Lab Technician
Detective

Entry Requirements

Five GCSE passes,
including Science



New
for
2018!

BTEC Courses

Business Studies

Reasons to Study the Course

Welcome to the world of business. Combining elements of accountancy, finance, marketing, organisational studies and economics, BTEC Business Studies provides a broad insight into how businesses run effectively and efficiently. Inspiring the next Deborah Meaden and Alan Sugar, Business Studies nurtures the business brains of tomorrow. Reflecting on current practice and business environments, students will get the opportunity to develop fundamental communication and organisational skills which will be transferable into the workplace. Studying the important issues challenging governments and business leaders, students will learn how companies operate internally and within the global marketplace.

Course Content

Over the two years, students will work towards gaining a clear understanding of business practice and managerial expertise to become future industry-savvy pioneers. Delving into an array of different modules which delve into key business elements, students can choose to study either four or eight modules depending on how many A-Levels they would like to undertake.

Assessment

Coursework and exams

Progression

Product Manager
Data Analyst
Human Resources

Entry Requirements

Grade 4 and above in English and Maths



ICT

Reasons to Study the Course

Introducing students to the idea of creating and using IT systems to manage and share information, a BTEC in ICT will provide students with a range of skills relating to the world of IT. Throughout the two years, students will develop a common core of IT knowledge and study areas such as the relationship between hardware and software that form an IT system, managing and processing data to support business and using IT to communicate and share information.

Course Content

Building a clear understanding of how IT systems are developed and managed along with how social media is used in the work place, students will develop their knowledge and skills ready for the workplace. There are optional topics to choose from in which students can learn how to develop websites or define and analyse data.

Assessment

Coursework and exams

Progression

Social Media Manager
Website Developer
IT Systems Manager

Entry Requirements

Grade 4 and above in English and Maths



BTEC Courses

Engineering

Reasons to Study the Course

For students looking for a future career in engineering, our BTEC in Engineering will open the door to a world of possibilities. Students will build a foundation of knowledge about the theory behind the principles used with the industry and have an abundance of opportunities to put this to practice in the workroom. For aspiring professional engineers, supervisors or managers, students will learn how to apply maths and physics in an engineering environment and develop strong links with our employer partners. The course provides students the opportunity to develop knowledge and skills in the design, development and manufacture and maintenance of engineering products and system.

Course Content

During the first year, students will develop a significant common core knowledge of engineering, from health and safety in the engineering workplace to mathematics for engineering technicians. In the second year, students get the opportunity to choose a specialise subject to follow:

Mechanical

Students will get the chance to discover mechanical principles, engineering drawing for technicians and computer aided design.

Electrical & Electronic

Over the year, students will uncover key electrical and electronic principles, developing solutions to a wide range of technical problems.

Aeronautical

Flying high, students will explore the theory of flight and its principles and applications of aircraft mechanical science.

Manufacturing

Students will have the opportunity to develop their skills in a range of mechanical, business and design principles.

Computer

Delving into the world of computers, students will integrate and learn about several fields of electrical engineering and computer science.

Assessment
Coursework

Progression
Electric Engineer
Aeronautical Engineer
Automotive Engineer

Entry Requirements
Grade 4 or above in
English and Maths



Additional Courses

Pre-Apprenticeship Course

Reasons to Study the Course

If students haven't achieved the grades they were hoping for in GCSE English and Maths, our Pre-Apprenticeship course offers the opportunity for students to focus their Maths and English resits with an opportunity to enhance their practical engineering skills, putting them ahead of the crowd when applying for apprentice posts. Two days a week, students will either be working towards a project or gaining industry work experience with one of our employer partners.

Course Content

During the year long course, students will spend their time working towards their resits and a Cambridge Technical in Engineering. Spending time in the workshop, students will be exposed to engineering process such as welding, joinery, metal forging and manufacturing processes.

Assessment

English and Maths
GCSE resits

Progression

Apprenticeship

Entry Requirements

None



AAT

Reasons to Study the Course

New for 2018, we're providing students the opportunity to add another string to their bow with an industry recognised qualification in accounting. For students who see a pathway in business as their future, the AAT Course will put students at the top of the pile when applying for jobs in the finance industry.

Course Content

Over the period of the course, students will gain a solid foundation in finance administration. Preparing students for a junior or entry level accounting role, the course covers areas such as double entry bookkeeping, basic costing principles and how to effectively use industry standard accounting software.

Assessment

Computer exams

Progression

Accountant
Financial Director
Tax Technician

Entry Requirements

Grade 4 or above in
English and Maths

New
for
2018!

Professional
Qualification



Additional Courses

Core Maths

Reasons to Study the Course

Core Maths gives students the opportunity to develop their understanding and ability to apply mathematics through scenario-based tasks, building student's confidence in applying maths to real-life situations. Content is specifically chosen for its relevance to a wide range of future studies and employer sectors. When choosing a standalone BTEC course, Core Maths is a mandatory requirement, complimenting engineering, science and IT courses.

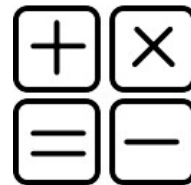
Course Content

Examining maths in real-life scenarios, maths is investigated through topics such as social media, sport, finance and the engineering industry. Understanding how we use maths topics such as statistics, linear programming and sequences and growth in different situations, students will be equipped with key analytic skills which can be applied in their future destination.

Assessment
Two exams

Progression
All careers

Entry Requirements
Grade 4 or above in
Maths and for students
not studying A Level
Maths



Extended Project Qualification

Reasons to Study the Course

Choosing to undertake an Extended Project Qualification, students will get the opportunity to select a topic they are passionate about and research the subject in-depth. Producing either a written report, an artefact, a model or even a performance, the qualification gives students the necessary preparation for university-level study and will help boost their degree apprenticeship application. The majority of the project will be expected to be carried out in the students independent study time.

Course Content

As the independent research project evolves, students will be assessed on their ability to manage, develop, record and execute their ideas with the completion of a production log. At the end of the course, students will showcase their communication skills by presenting their project.

Assessment
Project

Progression
All Careers

Entry Requirements
Grade 4 or above in
English and Maths



Additional Courses

PRINCE2

Reasons to Study the Course

Preparing students for the workplace, PRINCE2 provides students with an introduction to project management methodology. The complexity of projects and the importance that they have to an organisations success has led to the development of a range of project management methods. The most popular project management methodology around the world is that of PRINCE2 with over a million examinations taken around the world. We're the only 14-18 college in the UK delivering PRINCE2, leaving our students with a major advantage when applying for future career roles in a range of different employment areas.

Course Content

Over the period of the course, students will be taught different project management concepts, including the components that make up a project, the language of projects and how projects are managed. As all organisations around the world undertake projects, students gain valuable organisational skills and the expertise to manage their time.

Assessment
Single exam

Progression
All careers

Entry Requirements
Grade 4 or above in English and Maths



Professional
Qualification

Resilia

Reasons to Study the Course

One of the biggest challenges that organisations face today is that of cyber security. As cyber attack methodologies have changed it is no longer enough for organisations to rely entirely on a central approach to maintaining security. Tackling this issue, Resilia provides students an in-depth understanding of cyber risks and methodologies to deal with these, giving students major advantages in the work place of many industries.

Course Content

Resilia training goes to the heart of cyber resilience by equipping students with the skills and behaviours to make the right decisions when exposed to cyber risks. Throughout the course, students will discover topics such as phishing and its impact, online safety focusing on social media usage and safety and Information handling.

Assessment
Single exam

Progression
Forensic Computer Analyst
Security Architect

Entry Requirements
Grade 4 or above in English and Maths



New
for
2018!

Professional
Qualification