



Courses we offer

The most employable students in Corby

Corby Technical School Sixth form offers a range of courses with a strong STEM focus, we are building a reputation for delivering strong academic results coupled with high quality pastoral support. In this brochure we have detailed the courses we plan to offer in September 2020, if you have any further questions please contact the school enquiries@corbytechnicalschool.org

At Corby Technical School students will thrive in an atmosphere where they will feel safe, confident and supported in all aspects of their curriculum. Our aim is to be a specialist provider of STEM orientated qualifications to enable students to progress to their next steps in life equipped with the key transferable skills ready for a fast changing global market.

The relationships forged with subject teachers over time at Corby Technical School are highly valued by students and the pastoral care we offer ensures that every student has the support in place to achieve their goals.

We are excited by the courses offered at Corby Technical School and the opportunities for work experience available to our students to help them become the most employable students in Corby.

Courses for 2020 / 2021

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Alongside our qualifications we also expect students to participate in the wider school experience. Students will have the opportunity to complete an Extended Project Qualification (EPQ) and do relevant work experience, they will benefit from our high quality careers advice and experienced pastoral team. This enhanced curriculum will help students to stand out in the application process for their next steps.



Course Entry Requirements 2020

Entry requirements

There are two routes of application for students to apply for:

Route 1: A Level Route

- The school entry requirements for all applicants will be the same and are a minimum of five higher grade GCSE results (grades 9 to 5) including GCSE English Language at grade 9 to 5 and GCSE Mathematics at grade 9 to 5 (grade 6 Mathematics in the case of a STEM only A level pathway).
- In order to study individual subjects the specified GCSE entry grade criteria for each respective subject, as outlined below needs to be met.

Route 2: Other Route

- The school entry requirements for all applicants, external or internal, will be the same and are: a minimum of four higher grade GCSE results (grades 9 to 5) including at least one of GCSE English Language at grade 9 to 5 or GCSE Mathematics at grade 9 to 5. Students will be expected to retake the lower of the Maths or English GCSE as part of this offer.
- In order to study individual subjects the specified GCSE entry grade criteria for each respective subject, as outlined below needs to be met.

| Subject | Requirements |
|--|--|
| Applied Science Level 3 Cambridge Technical | Combined Science GCSE at Grade 5, 5 or above or two separate science GCSE's at Grade 4 or above. |
| Biology A level | Grade 6 or above in GCSE Biology and another single science, or Grade 7, 7 or above in Combined Science. |
| Chemistry A level | Grade 6 or above in GCSE Chemistry and another single science, or Grade 7, 7 or above in Combined Science. |
| Computer Science A level | Grade 6 or above in GCSE Computer Studies if studied or 6 or above in GCSE Maths if not studied |
| Creative Digital Media Production BTEC | Grade 5 or above in GCSE English |
| Design Engineering A level | Grade 6 or above in Maths or Physics or Combined Science or DT |
| Maths A level | Grade 7 or above in GCSE Mathematics |
| Physics A level | Grade 6 or above in GCSE Physics and another single science, or Grade 7, 7 or above in Combined Science. |
| Sport and Physical Activity Level 3 Cambridge Technical | Grade 5 in Science and a Grade 5/Merit in a Sport qualification |



Course Entry Requirement: Combined Science GCSE at Grade 5 ,5 or above or two separate science GCSE's at Grade 4 or above.

Students will develop professional and practical skills through carrying out real experiments and research.

You will gain an understanding of the different types of scientific industries and settings plus how laboratory design can vary across organisations and sectors. Students will apply their skills, knowledge and understanding to activities relevant to one pathway: food, environmental or human sciences.

Apart from applied science sector specific content, the requirements of the qualification will mean students develop the transferable and higher order skills that are highly regarded by both HE and employers. For example, carrying out practical laboratory tasks, planning investigations, collecting, analysing and presenting data, and reviewing and refining the methodology of practical and laboratory based work.

Course Structure

The course is broken down into 5 units; two are assessed through formal exams and three through controlled assessments that look at applying and evidencing theory through practical means. The units are as follows:

| | |
|--------|--------------------------------------|
| Unit 1 | Science fundamentals |
| Unit 2 | Laboratory techniques |
| Unit 3 | Control of hazards in the laboratory |
| Unit 4 | Microbiology |
| Unit 5 | Product testing techniques |

What can I do with a qualification in Applied Science?

This level 3 qualification is equivalent to an A level and can be used for applications to Higher Education or for employment within the scientific field.

Student who have gained the level 3 Cambridge Technical in Applied Science have gone on to careers in areas such as;

| | | | | |
|--------------------|------------------|-------------------|------------|-----------------|
| Biological science | Forensic Science | Molecular biology | Nursing | Sport Science |
| Medical technology | Midwifery | Paramedic | Biophysics | Food technology |



Course Entry Requirement: Grade 6 or above in GCSE Biology and another single science, or Grade 7,7 or above in Combined Science.

Biology is the science of life: how living organisms function, develop, reproduce and evolve, from the scale of genes up to that of ecosystems. Biology also helps society make decisions about scientific issues and how all science specialisms contribute to the success of economy and society.

This course will explain interesting things such as:

- How 1 meter of DNA can fit inside the nucleus of a cell.
- How a Mung beans respire.
- How a heart is able to generate its own beat.

It can also help you answer very interesting questions such as: Do the lungs really have a surface area the size of two tennis courts?

This course will involve working both independently and as a group, applying problem solving skills to both practical and theoretical situations.

Course Structure

The A-Level comprises of 6 modules combined with the practical endorsement

| | |
|----------|--|
| Module 1 | Development of practical skills |
| Module 2 | Foundations in Biology |
| Module 3 | Exchange and Transport |
| Module 4 | Biodiversity, Evolution and Disease |
| Module 5 | Communication, Homoeostasis and Energy |
| Module 6 | Genetics, Evolution and Ecosystems |

What can I do with A level Biology?

On completion of the A-Level many students elect to continue with Biology or related subjects at university. The qualification may also provide opportunities for direct entry into a vocation related to medical laboratory technology, in pharmaceutical and biological/biotechnological industries. Overall, A-Level Biology can be considered an ideal course to introduce students to a career in science.

| | | | | |
|--------------------|------------------|-----------|--------------------|--------------------|
| Medicine | Forensic Science | Dentistry | Biological science | Veterinary Science |
| Medical technology | Sport Science | Paramedic | Physiotherapy | Food technology |



Course Entry Requirement: Grade 6 or above in GCSE Chemistry and another single science, or Grade 7,7 or above in Combined Science.

Chemistry is an active and continually growing science that has vital importance to our world. Although the history of chemistry goes way back to ancient times, the course focuses on modern issues and you will soon see how up to date this experimental science is.

If it wasn't for Chemists the diesel in our cars would freeze every winter, we wouldn't have the medicines available to us now and specialist clothing and equipment for motor racing, rescue services and sports wouldn't be available.

Chemistry takes the most basic of substances, the atom, and builds in concepts of bonding in more detail than in GCSE. You will see how the structure of a molecule is defined by the angle at which atoms are bonded together. How energy moves between the surroundings and the reaction which will determine the type of product and type of reaction which occurs.

Course Structure

The A-Level comprises of 6 modules combined with the practical endorsement

| | |
|----------|--|
| Module 1 | Development of practical skills |
| Module 2 | Foundations in Chemistry |
| Module 3 | Periodic Table and Energy |
| Module 4 | Core Organic Chemistry |
| Module 5 | Physical Chemistry and Transition Elements |
| Module 6 | Organic Chemistry and Analysis |

What can I do with A level Chemistry?

On completion of the A-Level many students elect to enter the world of Chemistry through different avenues either by progression on to university, a higher level apprenticeship or into a science orientated career . Overall A-Level Chemistry is highly regarded as a good academic qualification by employers and universities.

| | | | | |
|--------------------|----------------------|-----------|------------|--------------------|
| Medicine | Forensic Science | Dentistry | Pharmacy | Veterinary Science |
| Medical technology | Chemical Engineering | Paramedic | Metallurgy | Food technology |



Course Entry Requirement: **Grade 6 or above in GCSE Computer Studies if studied or 6 or above in GCSE Maths if not studied**

The A-Level in Computer Science will build on the knowledge gained on the GCSE Computer Science course. There is a high emphasis on programming and computational thinking, allowing you to hone your problem solving and technical skills.

A Level Computer Science helps you to understand the core academic principles of computer science. Classroom learning is transferred into the creation of real-world systems. The programming project requires you to devise, plan and develop a piece of software to solve a real world problem. You will develop your technical understanding as well as your ability to analyse and solve problems using computational thinking. Computer Science is a highly creative subject that combines innovation and technical skill. You will develop advanced problem solving skills allowing you to specialise in the area of Computer Science that matches your own interests at either University level or as part of your career journey.

Course Structure

Students will be assessed on Computing Principles, Algorithms and Problem Solving and Computer Systems. Combined, these areas of study provide students with a rounded Computing education that will prepare for further technical study and technical careers. Students knowledge will include an in depth understanding of a computer's architecture, how data is transmitted across networks, legal and moral issues in computing and software development.

The A-Level in Computer Science is marked in 3 components. This is made up of two externally marked examinations (AS and A-level) and one coursework project. The breakdown is as follows

AS Exam – 40%

A2 – Exam – 40%

Coursework (Year 13) – 20%

What can I do with Computer Science A level?

On completion of the qualification many students elect to enter the world of Computing through many different avenues either by progression on to university, a higher level apprenticeship or into a technology orientated career . Overall A-Level Computer Science is highly regarded as a good academic qualification by employers and universities.

| | | | | |
|--------------------|---------------|-----------------|-----------------------------|-----------------------|
| Software developer | Web developer | Games developer | Information Systems manager | Multimedia programmer |
| Network manager | IT consultant | Intelligence | Technical support | Digital strategy |



Course Entry Requirement: **Grade 5 or above in GCSE English**

The BTEC in Creative Digital Media Production provides an exciting insight into both the creative and technical practice in the modern media industry. Fast paced and incredibly competitive, media jobs are highly sought after by school leavers and graduates. This course provides you with the skills, as well as encouraging your determination to succeed to provide you the best possible chance to break into the digital media industries.

This course focusses on a number of main elements; an understanding of media representation (understanding your audience and how media products can meet their needs), pre-production (understanding the requirements of planning and delivering a digital media product) and the necessary technical skills in order to create a digital product to meet a commission.

The school will draw upon the expertise of the Computer Science and ICT department in order to deliver additional modules in Website Production and Digital Games Production in order for you to specialise in a specific, highly competitive area of media production in the UK.

Course Structure

The course is broken down into four units; two are assessed externally, the remaining two are assessed through controlled assessments that look at applying and evidencing theory through practical means. Students may chose between units 4 and 5. The units are as follows:

| | |
|--------|----------------------------|
| Unit 1 | Media Representations |
| Unit 2 | Pre-Production Portfolio |
| Unit 3 | Responding to a commission |
| Unit 4 | Website Production |
| Unit 5 | Digital Games Production |

What can I do with Creative Digital Media Production BTEC?

On completion of the qualification many students elect to enter the world of digital media through many different avenues either by progression on to university, a higher level apprenticeship or into a technology orientated career or media.

| | | | | |
|---------------|-----------------|--------------------------------|--------------|----------------|
| Media studies | Journalism | Media production | Marketing | Animation |
| Sound editor | Games developer | Film and television production | Film studies | Audio Engineer |



Course Entry Requirement: Grade 6 or above in Maths or Physics or Combined Science or DT

Engineering is an inspiring, rigorous and practical subject. Using creativity and imagination, students design and make products that solve real and relevant problems.

Our aim is to equip all students with relevant and transferable skills, enabling them to produce high quality outcomes in their practical work.

Engineering is all about problem solving which is essentially what Design Technology is about, so the topics will be based on coming up with a solution to a problem set by the department through design, modelling and practical sessions utilising the subject knowledge that runs alongside it.

Course Structure

The course will teach you about the three related areas of engineering through practical, project work and theory which will underpin your understanding.

You will study a broad course of a technical Design & Technology/ Engineering subject which builds on the core of what you have been taught across GCSE and focuses on structural, mechanical and electronic engineering.

Year 12 is used to build a foundation of new content through some high level A grade style projects which will stretch and challenge you to produce something amazing and get your teeth into! It will give you a strong basis of knowledge as well as making skills and folder work, which can then be applied to the Coursework element in Year 13 which we start at the end of Year 12 and counts for 50% of your final grade.

You will have to produce a portfolio which demonstrates your ability to research, design, develop, make and evaluate your chosen product of your choice.

There is also an examined component at the end of the course

What can I do with A level Design Engineering?

Studying Design Engineering shows an employer that students are able to use a wide range of academic and practical skills and can apply their knowledge to solve problems. Paired Design Engineering with Maths and Physics would be an ideal combination for a university or apprenticeship application in Engineering. Students often go on to careers in;

| | | | | |
|----------------|--------------|--------------|--------------|-----------------|
| Engineering | Robotics | Construction | Conservation | Design |
| Communications | Architecture | Design | Transport | Disaster relief |



Course Entry Requirement: GCSE Mathematics - Grade 7 or above

As well as being a fascinating and intriguing subject that helps you unlock the mysteries of science, technology and statistics, studying Mathematics offers higher earning potential, exciting career opportunities and a grounding in important life skills.

Course Structure

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|--|--|--|--|---|
| Paper 1 – Pure Mathematics | These two papers are both two hours in length and can cover any of the core mathematical content of the course. The two papers are both worth 33.3% of your A Level and will cover: <ul style="list-style-type: none"> ▪ Algebra and Functions ▪ Coordinate Geometry ▪ Differentiation | | | |
| Paper 2 – Pure Mathematics | <ul style="list-style-type: none"> ▪ Integration ▪ Exponentials & Logarithms ▪ Vectors ▪ Trigonometry ▪ Proof ▪ Sequences & Series ▪ Numerical methods | | | |
| Paper 3 – Statistics & Mechanics | This paper is also two hours in length and worth 33.3% of your A Level. It is split into two sections; section A is Statistics and section B is Mechanics. <table border="1" data-bbox="277 1132 1380 1443"> <tr> <td data-bbox="277 1132 831 1443"> Section A will cover: <ul style="list-style-type: none"> ▪ Statistical sampling ▪ Data presentation and interpretation ▪ Probability ▪ Statistical distributions ▪ Hypothesis testing </td> <td data-bbox="831 1132 1380 1443"> Section B will cover: <ul style="list-style-type: none"> ▪ Quantities and units in mechanics ▪ Kinematics ▪ Forces and Newton’s Law ▪ Moments </td> </tr> </table> | | Section A will cover: <ul style="list-style-type: none"> ▪ Statistical sampling ▪ Data presentation and interpretation ▪ Probability ▪ Statistical distributions ▪ Hypothesis testing | Section B will cover: <ul style="list-style-type: none"> ▪ Quantities and units in mechanics ▪ Kinematics ▪ Forces and Newton’s Law ▪ Moments |
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What can I do with A level Mathematics?

Mathematics is one of the most widely respected subjects to study at A-Level and at University. The skills gained can be applied to a variety of careers including:

| | | | | |
|---------------|-------------------|-------------------|-------------|-------------------|
| Actuary | Accountant | Statistician | Stockbroker | Engineer |
| Meteorologist | Quantity Surveyor | Software Tester | Analyst | Market Researcher |
| Banking | Teaching | Aircraft Industry | Economist | Astronomer |



Course Entry Requirement: Grade 6 or above in GCSE Physics and another single science, or Grade 7,7 or above in Combined Science.

There are two big questions for Physicists: What is everything made of and why does it behave a certain way?

This course will explain interesting things such as:

- Quarks, leptons, hadrons, mesons etc. and how these link with the structure of an atom.
- What exactly is happening at CERN in Geneva?
- How does a guitar pick-up work?
- How Einstein and Newton weren't right about everything!

Course Structure

The A-Level comprises of 6 modules combined with the practical endorsement

| | |
|----------|----------------------------------|
| Module 1 | Development of practical skills |
| Module 2 | Foundations in Physics |
| Module 3 | Forces and Motion |
| Module 4 | Electrons, Waves and Photons |
| Module 5 | Newtonian World and Astrophysics |
| Module 6 | Particles and Medical Physics |

What can I do with A level Physics?

On completion of the A-Level many students elect to enter the world of Physics through different avenues either by progression on to university, a higher level apprenticeship or into a science or technology orientated career . Overall A-Level Physics is highly regarded as a good academic qualification by employers and universities.

| | | | | |
|--------------------|------------------------|--------------------------|-------------|------------------------|
| Medicine | Electrical Engineering | Mechanical Engineering | Electronics | Automotive Engineering |
| Medical technology | Finance | Aeronautical Engineering | Metallurgy | Programming |



Course Entry Requirement: **Grade 5 in Science and a Grade 5/Merit in a Sport qualification**

Sport is currently one of the fastest-growing industries in the UK and offers a huge range of professions in a variety of different areas. These can be from grass-roots level, all the way through to international level, and can focus on improving students' own or other athletes' performance through coaching, fitness training, technology, psychology or nutrition.

Students will study an exciting, inspiring and challenging qualification created to develop transferable skills that are essential in for further study. This course is also an ideal foundation for students wanting either to go on to higher education, or aiming to enter the workplace, because of the combination of a theoretical background that's reinforced with practical learning and assessment.

Course Structure

The course is broken down into 6 units; two are assessed through formal exams and four are assessed through controlled assessments that look at applying and evidencing theory through practical means. The units are as follows:

| | |
|--------|---|
| Unit 1 | Body systems and the effects of physical activity - exam |
| Unit 2 | Sports coaching and activity leadership – controlled assessment |
| Unit 3 | Nutrition and diet for sport and exercise – controlled assessment |
| Unit 4 | Sport organisation and development – exam |
| Unit 5 | Sports injuries and rehabilitation – controlled assessment |
| Unit 6 | Physical activity for specific groups – controlled assessment |

What can I do with a qualification in Sport and Physical Activity?

This level 3 qualification is equivalent to an A level and can be used for applications to Higher Education or for employment within sports or scientific fields.

Student who have gained the level 3 Cambridge Technical in Sport and Physical Activity have gone on to careers in areas such as;

| | | | | |
|----------------------|--------------------|------------------------|------------------------------|-----------------------------|
| Sport science | Physical Education | Sport coaching | Physiotherapy | Sport an Leisure management |
| Sport administration | Sports development | Leisure and recreation | Physical training instructor | Leisure assistant |



Alongside your studies being involved in the life of the school will also offer exciting opportunities to expand your skill set. Having the courage to take responsibility for an extra-curricular club, signing up for work experience or volunteering at a local primary school will give you the edge when applying for university or employment. These fantastic opportunities develop confident leaders who have the skills to work in a team, make decisions and work independently.

Enrichment opportunities are an important and significant area of learning as they provide students with new and challenging experiences. These opportunities allow students to develop new skills, take risks, experiment with new experiences and consequently grow in self-confidence.

Corby Technical School offers a positive, creative environment with high aspirations for all our students.

Inspiration, Endeavour and Community Programme

At Corby Technical School it is our aim to create the most employable students in Corby. The IEC (Inspiration, Endeavour and Community) Programme helps students to meet the demands of employers by developing their employability skills such as leadership, organisation and management alongside their academic qualifications.

Students are actively encouraged to participate in this programme, they may act as mentors for younger students, support extra curricular activities, volunteer for a charity or at a primary school or complete work experience

Extended Project Qualification

The Extended Project Qualification (EPQ) AS is a Level 3 course taken alongside 'A' levels. An EPQ is valued amongst higher education institutions as it demonstrates dedication to independent learning and contributes towards entry requirements at many universities.

An EPQ is an excellent taster of university-style learning as it is effectively an **independent research project** which can, but does not have to, relate to an A Level subject that is being studied.

Work Experience

We ensure students have access to many meaningful encounters with employers, through talks, visits and events as well as experiences of various workplaces. During the sixth form, career-entry routes are fully explored and explained, including apprenticeships and further education opportunities.

All students will have the opportunity to complete work experience, this is a great way to learn more about the world of work and gain valuable skills and experience that will enhance your CV and help you stand out.