UTC PLYMOUTH STEAM CURRICULUM POLICY

'Teaching and learning is The Core Purpose of UTC Plymouth. Our Curriculum is carefully constructed to support our intent. '

Our Mission

Our Mission is to ‘transform lives through learning’ by facilitating a high quality, aspirational experience that ignites confidence and expands opportunities within STEAM related industries. Students will become problem-solving, creative thinkers that are work-place ready.

Our Vision

Our vision is driven by a profound and shared ambition to motivate and enable all young people to fulfil their potential, become outstanding citizens and make a positive contribution to the economic growth of the city. We are a centre of excellence for Plymouth in advanced manufacturing engineering underpinned by our STEAM centred curriculum.

Our young people are offered outstanding learning opportunities in a broad range of subjects focusing on industry, innovation and technological competence. All barriers to success will be removed and no young person will be held back in their quest to become the next generation of engineers, scientists and environmentalists.

Our Offer

We offer an exceptional opportunity to focus on a curriculum where Science, Technology, Engineering, Art and Maths subjects are integrated with core national curriculum studies. We also aim to ensure that all students realise their ambitions in STEAM careers whilst paying careful attention to preparing young people for their future as a young adult.

We work closely with our industry partners to fully prepare our students to progress successfully to University, higher apprenticeships or employment. In an ever-changing climate, selecting the right educational pathway is key in enabling students to open up future opportunities, whatever they may be. At UTC Plymouth, we pride ourselves on delivering an adaptable curriculum that moves with the demands of industry, economy and community needs. Basic skills are absolutely vital but are no longer enough. Young people now need the capacity to process and evaluate information, make informed judgements and learn how to learn. Our curriculum supports our students to keep up with the technological change of our rapidly changing world.

City Picture

The concept of core transferable skills are not new in education. It was for this reason that University Technology Colleges were conceived. By linking with local employers and delivering an employer-led curriculum, the intention is to develop students with STEAM based career aspirations to build a bridge between the world of education and the world of work.

The current Plymouth Plan acknowledges that there is demand from employers for new recruits as our companies and businesses grow. There is a need to replace an ageing workforce combined with the need to become increasingly more productive to remain competitive and gain market advantage. Approximately 60% of employment in Plymouth is in the STEAM sector. Current projections show that 203,000 people need to enter the labour market with level 3 and above qualifications in engineering,

every year, until 2024 to fill the national skills gap. Digital technology careers have, this year, added 157,000 jobs to the national labour market with over 3000 skilled engineering jobs being created.

We are committed to:

- Developing and delivering an employer-led curriculum contextualised in the STEAM business world
- Strengthening the pipeline of STEAM Learners across key stages 2 to 5
- Supporting the current and future needs of the local economy by generating productive partnerships with industry and business
- Providing capacity and skills for employers across all regions in line with the economic priorities including an aim to offer low-carbon qualifications
- Offering partnership outreach opportunities with local educational establishments
- Building an innovative, specialist and reflective curriculum offer which develops the future expertise, skills and understanding for an ever-changing world
- Producing engaged and employable learners with world wide ambitions

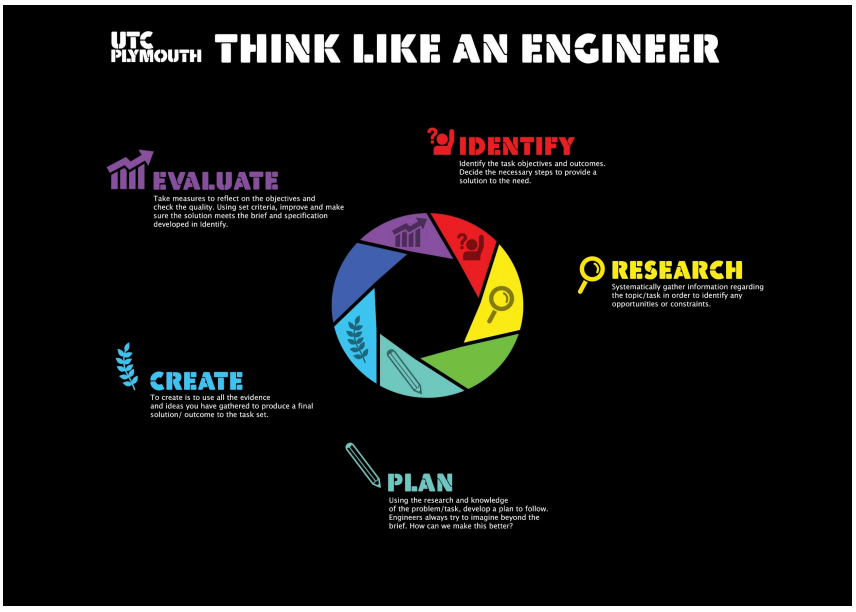
Our Intent is to develop the whole person in order to prepare them to be life-long thinkers within whatever career sector they choose. Our 'Think Like an Engineer' prepares our young people with an evidenced based mindset to become resilient learners who can identify problems, make mistakes, apply their skills and reflect critically.

We aim for our young people to develop into independent, empathetic members of society who will be the architects and builders of tomorrow's world.

'Think Like An Engineer' mindset for learning

At UTC Plymouth, all curriculum areas follow the engineering design process in order to promote consistency, understand critical thinking as well as develop a sense of unity. The stages are as follows:

Identify, Research, Plan, Create, Evaluate



UTC Curriculum Policy - Knowledge for Life. Skills for the future

Intent

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Our curriculum focuses on developing the right combination of knowledge, skills, and mindsets to ensure every student can fulfil their academic, social and creative potential, improving life-chances for all, including those disaffected or disadvantaged.

We want to enable our students to reach standards of attainment comparable with the best performing jurisdictions in the world and provide opportunities for all students to develop an understanding of our shared culture and their place in it. As a University Technical College we further equip our students with the knowledge, technical and digital skills that will empower them to engage in the local, national and global workplace. Through our curriculum we work closely with local and national employers. With this in mind, our curriculum:

- is academically challenging and supports students' progress through promoting knowledge-rich learning, reading and literacy;
- is sequenced, progressive and responsive to the needs of our students;
- is broad, balanced and ambitious for all students, regardless of prior attainment;
- maximises opportunities to apply theoretical knowledge to real life problems and employer led projects
- develops high quality verbal, written, visual and digital communication skills
- promotes professional, entrepreneurial skills and leadership
- develops students' cultural capital and builds community so that students know how to relate to people who don't share the same culture, think the same way or believe the same things
- promotes personal responsibility and the importance of demonstrating kindness, showing respect and living without harm

The Key Stage 3 Curriculum

At UTC Plymouth our curriculum is designed to provide the very best breadth of provision to develop young minds into creative, problem-solving adults. It promotes STEAM (Science, Technology, Engineering, Art, Maths) education for life and technical skills for the future. The KS3 Curriculum aim is to keep subjects as broad and balanced as possible. In Year 10 and 11 our students concentrate on their GCSE and Vocational courses. Our KS3 curriculum includes:

- English Language and Literature

- Humanities (History)
- Modern Foreign Languages (German)
- Philosophy/Ethics
- Science and Geographical Science
- Mathematics.
- Art
- Engineering Design
- Physical Education
- Personal, Social and Health Education and Ethics
- Digital Technology including Computing and IT

Students joining in year 7 build on foundations from Year 6 in their feeder schools. They learn core knowledge and develop skills in English, Mathematics and Science. Through our UTC specialism they develop design, technical and digital expertise. We also explicitly develop oracy and communication skills.

Breadth and balance is maintained through humanities, PSHE and Ethics, modern foreign languages and physical education. They develop their cultural and social awareness through a carefully planned PSHE curriculum and Ethics education. From Year 9, leadership skills, personal and social responsibility are further enhanced through an optional Duke of Edinburgh programme and the opportunity to take part in our Combined Cadet Force.

Building Knowledge

Knowledge underpins skills. At UTC, the distinctive Key Stage 3 curriculum promotes the development of knowledge, so that students are able to call upon the most valued and valuable knowledge in each subject area when required to apply them to broader problems. Subjects have identified core content and knowledge that students are expected to learn in each year group. This is our subject experts' view of the most valued and valuable knowledge in their subject areas and which addresses the key question: 'What makes a good…mathematician / scientist / engineer etc?' using the 'Think Like an Engineer' pedagogy.

Reading and Oracy

In order for students to be able to access the curriculum in its entirety they need to be able to read to at least their chronological age. Development of the reading of more challenging texts is a priority for the curriculum and there are regular opportunities for students to read and respond to a variety of texts. This also forms part of the pastoral curriculum. Explicit Oracy lessons are taught weekly as this is the most important skill for employers as well as a human being.

Cultural Capital

We want our students to have the skills, knowledge and values to succeed in education and life more generally. Through the formal curriculum, we share with our students the best that has been thought, said, created and achieved within each subject. We believe we have a duty to fill gaps in students' cultural capital if they are to access the curriculum in its entirety.

Cultural capital is crucial to students' development, not just in terms of academic success but also in their ability to contribute responsibly to the wider community and for their quality of life. Our curriculum will, therefore, explicitly teach this additional shared and valued knowledge, through lessons, the PSHE/RSE curriculum, projects, CCF and extra-curricular opportunities.

Personal Development

All students follow courses in personal, social, health and economic education (PHSE) and relationships and sex education (RSE) in line with the new statutory curriculum. The curriculum covers topics such as healthy relationships, anti-bullying, mindfulness and mental wellbeing, drugs education and citizenship. In addition, subjects identify opportunities to develop spiritual, moral, social and cultural (SMSC) awareness within their units of learning. One such example might be teaching students to keep safe online in ICT lessons.

Through mentor time, Drop Down Days, briefings, weekly Learning Review and lessons we seek to develop personal and economic well being, cultural understanding and social responsibility.

We also have a timetabled pastoral curriculum that is delivered daily between 8:30 and 9am. Learning Reviews take place every Friday in mentor groups so that students understand their priorities, progress targets and any issues relating to their ELPs (Effective Learning Points).

Lesson Allocation

Key stage 3 subject	Number of lessons per week
English language, literature and oracy	5
Mathematics	4
Science and Geographical Science	4
PSHE and Ethics	2 (Year 7&8), 1 (Year 9)
German	2 (Year 7&8), 1 (Year 9 or Core Consolidation)
IT	1 (Year 7&8), 2 (Year 9)
Humanities (History)	1
Art	1 (Year 7&8), 2 (Year 9)
Engineering Design	2
PE	2
**CCF and DofE Optional addition*	

The Key Stage 4 Curriculum

At Key Stage 4, our curriculum is ambitious, broad and balanced. ***Our Steam Curriculum*** (Science, Technology (digital), Engineering, Art, Maths) provides expert knowledge and experiences through industry-led learning and a focus on the 'Think Like and Engineer' mindset..

Our Foundation Curriculum

(English Literature/Language/Maths/German/Humanities/Oracy/PSHE/PE/CCF/Eco) prepares our students to develop the varied qualities needed to be a successful professional and a valued member of society. The suite ensures that students are challenged and gain the academic knowledge, technical skills and cultural capital to become rounded, independent and caring citizens of the global community. In addition, these subjects provide students with opportunities to access the widest possible range of courses in further and higher education within STEAM applications, as well as providing a basis for routes into other sectors should student ambitions change.

All of our students deserve the opportunity to achieve across a broad range of subjects in qualifications which are meaningful to them and which offer progression to a range of pathways at Key Stage 5 and beyond.

Key Stage 4 subject	Number of lessons per week
English language, literature and oracy	4
Mathematics	4
Combined science (Biology, Physics and Chemistry)	5
Engineering	3
Digital Technologies	3
PE	1
PSHE/RSE	1
Optional subjects (x1 of): *Art and design, Sports Science,* *Core subject support* **CCF and DofE Optional addition*	3

Building Knowledge and Skills

The curriculum at Key Stage 4 is designed to continue to build upon the foundations of knowledge students have learned at Key Stage 3 alongside the application of this knowledge to a broad range of increasingly complex problems. Where appropriate, skills will be explicitly taught and practised. Skills such as evaluation, analysis, synthesis and creativity are taught more explicitly at Key Stage 4 alongside the progression of core content.

Wider Knowledge

The curriculum aims to equip students for life-long learning and helps to engender an appreciation of human creativity and technical achievement. Students' development is not limited to the examination syllabus and subjects at Key Stage 4 are not constrained by the terminal examination. Students are given opportunities to engage in projects and develop a broader understanding of the subject over time, including a continuing emphasis on developing their cultural capital and knowledge of the wider content within each domain which is important to life-long learning. There is also a continued focus on developing students' cultural capital: the knowledge and values which empower social mobility.

Reading and literacy

It is vitally important to the development of all students that they have the necessary reading and literacy skills to access examinations at Level 2 and for them to be able to communicate effectively as adults. For this reason we maintain a focus on developing reading skills, through vocabulary building and ensure that all students are exposed to increasingly challenging texts wherever appropriate.

Personal Development

All students follow courses in personal, social, health and economic education (PSHE) and relationships and sex education (RSE) in line with the new statutory curriculum. Along with PE these programmes develop our students' social and personal wellbeing, whilst other subjects teach topics such as economic understanding and cultural understanding.

This includes developing our students' knowledge and understanding of British values and their place in 21st Century Britain and the world, as well as valued knowledge about mankind's technological, artistic and social development. Through mentor time, Drop Down Days, briefings and lessons we seek to develop personal and economic well being, cultural understanding and social responsibility. Religious education is embedded in and taught through the tutor time and assembly programme.

Students are encouraged, through the wider curriculum, to take part in regular fund-raising activities for our chosen charities. Our pastoral programme is designed to provide students with appropriate information and challenges regarding a range of topical issues such as care for the environment and volunteering.

Our projects, DofE and CCF programmes provide students with opportunities to take part in activities which challenge and extend them. Students develop leadership, organisation, resilience, initiative and communication - the skills that employers value highly.

Careers and Work Experience

All students in Year 10 and Year 12 undertake work experience. Students are encouraged to be focused on their future aspirations and we provide them with an up-to-date view of the labour market, both locally and on a broader scale. We help to facilitate this through expert advice and guidance provided through personal CIAG interviews during Key Stage 4.

The sixth form curriculum – What makes us different?

We teach students technical, scientific and mathematical subjects in a whole new way and are educating the inventors, engineers, scientists, mathematicians and technical leaders of tomorrow.

A key aspect of 'What makes us different' is our focus on wider enrichment through our employer linked curriculum, ensuring that students leave Sixth Form with not only high academic outcomes but a wider holistic experience, ensuring education for life and skills for the future. This maximises their potential for employment and higher education.

The UK needs advanced technical skills at all levels if we are to prosper in the 21st Century. Whether in manufacturing, wind farms, rail links or hi- tech hospitals, we need a workforce that can develop new products, stretch and reuse existing products and meet all the challenges of the future. As a University Technical College we are meeting the needs of the professional skills gap.

Pathways

We offer a bespoke level 3 curriculum with specialised pathways blending academic study with specialist technical courses, maximising progression to university, work and apprenticeships. Our pathways are designed to support progression from individual starting points and are offered based on GCSE/Level 2 outcomes (average points score):

- **Pre T-level Pathway**

  EAL L3 Diploma in Engineering Technologies with the option to retake Maths and English (functional skills)

- **Technical Engineering Pathway**

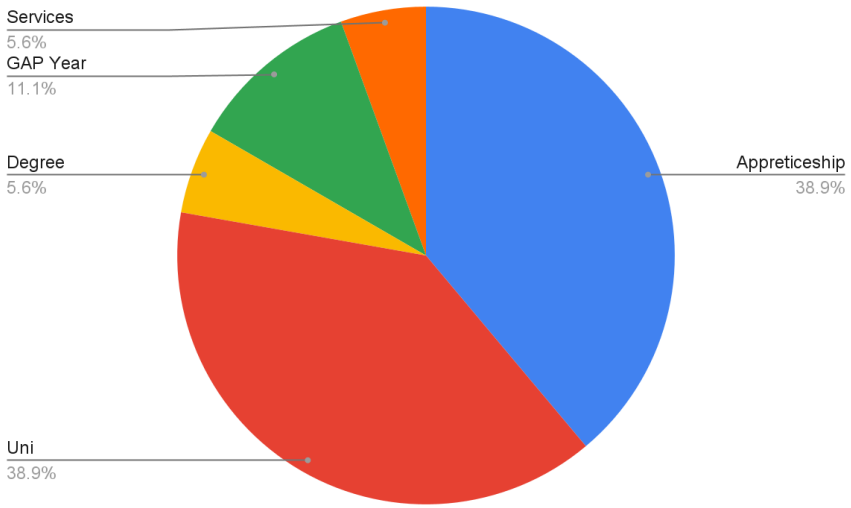
  Level 3 T Level in Design and Development for Engineering and Manufacture (3 x A-Level equivalent)

- **Digital Technologies Pathway**

  Level 3 T Level in T Level in Digital Production, Design and Development (3 x A-Level equivalent)

Our Pre-T-level pathway is an enabling, level 3 technical programme in Engineering that supports progression to either further study in relevant subjects ahead of progression into higher education, or to enable progression to suitable apprenticeship pathways, for students whose Level 2 outcomes (especially in English and Mathematics) are not secure.

Destination data KS5



The Timetable

The number of lessons allocated for each pathway is shown in the table below. Each lesson lasts for 1 hour Students have one allocated study day per week, this is for completion of assignment work. Students can work from home or can use the facilities onsite. If students require academic intervention, they will be requested to attend on their study days.

Key stage 5 subject	Number of lessons per week
Professional Pathway	Extended Diploma
T Level in Digital Production, Design and Development	19
T Level in Design and Development for Engineering and Manufacture	23
Resilience Pathway	Diploma
EAL Engineering Technologies	10
GCSE English	3
GCSE Maths	3

Personal Development

All students follow courses in personal, social, health and economic education (PHSE) and relationships and sex education (RSE) in line with the new statutory curriculum. In the sixth form these programmes continue to develop our students' social and personal wellbeing, along with their knowledge and understanding of British values and their place in 21st Century Britain and the world.

Students are encouraged, through the wider curriculum, to take part in regular fund-raising activities for our chosen charities. Within the personal development study programme (pastoral

programme), there is a balance of preparing students to manage their current lives as well as preparing them to manage future experiences. It will give them the knowledge, strategies and attributes required for independent living and the next stage of their education or career.

The study programme is mainly delivered by their mentor, however other forms of delivery such as Drop Down Days and briefings will also be used. Students will cover 3 key areas: health and wellbeing; relationships and sex education; wider world. As a University Technical College, we pride ourselves on the careers and industry information, guidance and experiences we offer to our students which are delivered across the year to both year groups. These include: Unifrog, work placements, Employer breakfasts, Aspirations Day and UCAS support.

Our employer-led projects, extended work experience placements, DofE and CCF programmes provide students with opportunities to take part in activities which challenge and extend them. Students develop leadership, organisation, resilience, initiative and communication - the skills that employers value highly.

Pastoral Curriculum

Year 7 and Year 8

Day	Focus
Monday	Virtual Briefing and Attendance
Tuesday	Reading- Fiction
Wednesday	Reading- Fiction
Thursday	Character Curriculum
Friday	Oracy

Year 9

Day	Focus
Monday	Virtual Briefing and Attendance
Tuesday	Reading- Fiction
Wednesday	Reading- Fiction
Thursday	Character Curriculum
Friday	Oracy

Year 10

Day	Focus
Monday	Virtual Briefing and Attendance
Tuesday	Reading - Fiction
Wednesday	Character Curriculum
Thursday	Academic Intervention- English Term 1, Maths Term 2, Science Term 3.
Friday	Oracy

Year 11

Day	Focus
Monday	Virtual Briefing and Attendance
Tuesday	Reading- Fiction
Wednesday	Academic intervention- Maths
Thursday	Academic intervention- English
Friday	Academic intervention- Science

Sixth Form Pastoral Plan

Year 12 BTEC

Day	Focus
Monday	Independent Study Day
Tuesday	Whole Sixth Form Briefing
Wednesday	Current Affairs Briefing
Thursday	Careers, Progression, PSHE, RSE
Friday	Whole School Virtual Briefing Learning Review SOP - Core Values and Expectations

Year 12 EAL and Digital Technology

Day	Focus
Monday	SOP - Core Values and Expectations for the week
Tuesday	Whole Sixth Form Briefing
Wednesday	Current Affairs Briefing
Thursday	Careers, Progression, PSHE, RSE
Friday	Virtual Briefing Independent Study Day

Year 13

Day	Focus
Monday	SOP - Core Values and Expectations for the week
Tuesday	Whole Sixth Form Briefing
Wednesday	Current Affairs Briefing
Thursday	Careers, Progression, PSHE, RSE
Friday	Virtual Briefing Independent Study Day

College day timings

Monday- Thursday:

Breakfast Club (optional)	7:45 - 8:20
Briefing/Mentor Time	8:30 - 9:00
P1	9:00 - 10:00
P2	10:00 - 11:00
Break	11:00 - 11:20
P3	11:20 - 12:20
P4	12:20 - 1:20
Lunch	1:20 - 2:00
P5	2:00 - 3:00
Mentor and DEAR time	3:00-3:15
Extra-Curricular/Revision Programme (Optional) and same day detentions.	3:15 - 4:15

Friday:

Breakfast Club (optional)	7:45 - 8:20
Briefing/Mentor Time	8:30 - 9:00
P1	9:00 - 10:00
P2	10:00 - 11:00
Break	11:00 - 11:40
P3	11:40 - 12:40
P4	12:40 - 1:40

Learning Review	1:40 - 2:00
(Dismissal Procedure)	2:00
Extra-Curricular/Revision Programme (Optional) and same day detentions.	2:15 - 3:15

Policy Review

Document Title:	Curriculum Policy (update September 2025)
Date of review:	July 2025
Committee responsible for review:	Governors
Chair of Committee	Nick Buckland
Date Approved:	July 2025