

Lincoln UTC

Engineering curriculum

We want our students to be inspired to become the designers and engineers of the future... passionate about their ability to be a force for good and make positive changes to the lives of individuals and the big issues which affect us locally, nationally, and globally.

Our curriculum aims to support students in developing a deep appreciation of the greatest that has ever been achieved in design and manufacture and, in particular, of Britain's proud heritage in these fields. Our students are the creative, innovative problem solvers of the next generation.

Our teaching ensures that students understand the moral, ethical and environmental concerns related to product design and manufacture such that they become an integral part of the solution, thinking and acting to promote responsibility and sustainability.

All of our engineering courses (design, manufacturing and systems and control) are sequenced so that students develop a mastery of the basic skills before learning how to code and operate computer-controlled processes and machines. Although their final designs will (most likely) be digital, engineers still need to be able to get their initial ideas on paper with a pencil and a drawing board. In industry, most manufacturing is highly automated, but the best engineers can still work with hand tools and produce prototypes on a traditional, manual lathe.

By the end of their course, all of our students will be 'industry ready' with a wealth of experience and training on industry standard equipment, and fluent in the use of the industry standard software which is necessary to operate it.

Our students will be assessed on a portfolio of their work linked to manufacturing and design challenges set, externally, by the examination boards. Students don't start on their assessed projects until we are confident that they have all (regardless of prior attainment, disadvantage, or special educational need) achieved mastery of the skills and the knowledge necessary for examination success. Students achieve this mastery through practice and repetition, tackling multiple challenges and projects that we have designed in-house. All our in-house challenges are carefully chosen to cover the full range of skills required by the exam board but also to give students the opportunity to exercise ambition, creativity, and artistic flair, going above and beyond the specification requirements.

We believe that our students should be afforded the opportunity to learn about and develop the widest possible variety of skills regardless of whether or not they will, ultimately be examined. Sculpture, wood turning, and welding (for example) are not formally assessed skills but that doesn't mean they don't have the ability to enthuse and inspire our students. These, and other opportunities, crafts and processes are woven into both the taught curriculum and the extra-curricular offer for Lincoln UTC's engineers.