



Education Case Study 05/2018

Company: University of Wolverhampton

..... Axiom too

Education Case Study

University of Wolverhampton
Axiom too



In response to the regional and national shortage of qualified engineering graduates, the University of Wolverhampton recently invested over £10m in advanced new engineering facilities and courses. The major investments at the University's Telford Innovation Campus are focused on enhancing facilities with the aim of providing students with access to technology at the forefront of engineering developments.

Students on new courses, including BEng (Hons) Motorsport Engineering, BEng (Hons) Chemical Engineering and BEng (Hons) Electronics and Telecommunications Engineering, will benefit from specialist equipment: including a design and visualisation facility, wind tunnels, engine test facilities, state-of-the-art machine tools and 3D printing facilities. In addition, laboratories have been established dedicated to electronics and telecommunications, metrology and materials testing.

Having invested in a wide range of design and manufacturing equipment, adhering to the maxim, it's not made until it's measured, Mark Stanford, Professor in Advanced Manufacturing Technology at the University's Telford Innovation Campus, recently searched for a Coordinate Measuring Machine (CMM) that would enable students to make precise in-process checks of their work and also accurately inspect the results of their practical manufacturing projects.

After judging several CMMs against a list of demanding criteria, an Aberlink Axiom too CMM was considered to be the ideal machine for the departments use. To ensure that the Axiom too was able to perform the many required measuring tasks, the CMM was delivered with tactile probes, a non-contact measuring camera, a flexible workholding fixture kit and Aberlink's dedicated Educational package. As many of the new CMM's tasks will involve measuring parts against CAD, Aberlink's programming for CAD and CAD comparison software modules were also supplied.

Professor Mark Stanford explained the recent Aberlink CMM purchase. "It is estimated that there will be a shortfall of around 200,000 qualified engineers in the UK by 2020. The University of Wolverhampton's expanded, first-class facilities demonstrate our commitment to the next generation of skilled engineers. Our courses combine activity based learning and live industrial project work with a real focus on creativity and employability.

"As much of our students work involves designing and making physical objects with demanding dimensional tolerances, we needed a precise means of measurement that would allow our students to verify the accuracy of the objects they have manufactured. As we believe in providing our students with access to the kind of advanced technology they will encounter in their future careers, a high speed, accurate CMM was the most obvious answer to our measuring needs.

"In addition to its speed and accuracy, the fact that the Aberlink Axiom too is used throughout industry and its operation is extremely intuitive, were major factors in our CMM choice. Also, a successful practical demonstration confirmed the CMM suitability.

"Now installed and fully operational, because of its ease of use and the accurate results it delivers, our new Aberlink CMM has been wholeheartedly embraced by our students and is in regular use. In addition to measuring single, one-off components, owing to the Axiom too's CNC nature, when required our students are able to load multiple parts onto the CMM's bed and perform rapid, automated inspection routines."

Education Case Study

University of Wolverhampton
Axiom too

The cost effective Axiom too is the best-selling CMM from the largest UK owned Coordinate Measuring Machine manufacturer. Aberlink's popular Axiom too CMM is available in both manual and CNC variants in a range of capacities and is described by Aberlink as the 'complete inspection centre'. As it boasts an aluminium bridge with a very low thermal mass the CMM is ideal for use in either controlled environments, such as inspection departments, or within less than perfect shop-floor conditions. Thanks to the Axiom too's use of advanced materials, the machine's reduced inertia also results in class leading speed of operation.

Borrowed from the laser optics industry, the CMM's sturdy granite table consists of an advanced granite/aluminium honeycomb construction. This technology provides natural damping and further improves the machine's thermal properties. Despite the Axiom too's generous X-Y-Z measuring volume (640mm x 600-900-1200-1500mm x 500mm), the machine's compact design occupies a relatively small footprint, with the controller and all peripherals housed within the Axiom too's workbench.

The Axiom too utilises Aberlink's renowned 3D software, ensuring greater user productivity and profitability. A welcome bi-product of any Aberlink CMM inspection routine is that a simultaneous picture of the measured component is created on the computer screen. Dimensions between the measured features, mirroring those that appear on the component drawing, can then be simply picked off as required. In essence this 'smart' software represents an intelligent measuring system that is able to automatically recognise and define the various features being measured. Aberlink 3D is the easiest to use and most intuitive CMM software currently available.

When supplied to Universities, University Technical Colleges (UTCs), in-house training establishments and other training providers, the Aberlink Axiom too is delivered with a comprehensive educational package to help students to quickly master the machine's use.

Visit us at: www.aberlink.com email: sales@aberlink.com
or call: +44 (0)1453 884461 for more information.