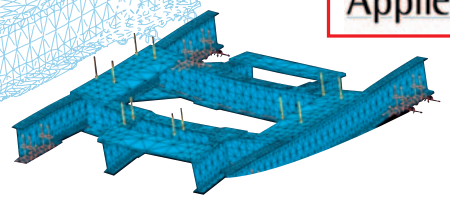
Craig Endicott teaching CATIA V5 using dual screens.

QAC in Harborne, Birmingham.

A QAC learner using CATIA V5.



CATIA V5 is very intuitive and learners can see the result of their efforts after just a few mouse clicks.

By David Treacher

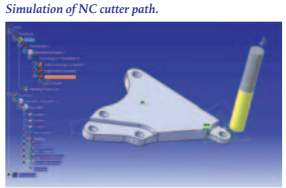
Queen Alexandra College: CATIA V5 Now Included

The Queen Alexandra College (QAC) is a unique establishment. It provides training and support within a supportive environment for people with disabilities, to give them the best possible chance of achieving their individual goals. The latest vocational course on QAC's curriculum is based upon CATIA V5.

The QAC which has been in existence for over 100 years is located in Harborne, a quiet leafy suburb of Birmingham, Britain's second largest city. The objective of QAC is to provide educational support for people with visual or other disabilities, enabling them to achieve both formal and informal qualifications. The valuable skills gained help to equip them for an independent life, both professionally and privately.

Each student – or 'learner' as QAC refers to them – is treated as an individual and follows a tailor-made timetable, designed to meet their personal needs and aspirations. Some learners are aiming to gain basic life skills to achieve independence. Others are striving for their first job, while some aim to acquire new skills to adjust to changes in their life.

Simulation of NC cutter path.



CATIA V5 – 'THE IDEAL EDUCATIONAL TOOL'

In September 2003, QAC introduced a new vocational course called 3D Computer Aided Engineering. Says Craig Endicott, Tutor in CAD and Manufacturing at the college, "We considered various alternatives that were available on the market, but decided that CATIA V5 was the ideal educational tool. Visually, it gives us a lot of flexibility. For example, the product structure tree can be enlarged and expanded to suit our learners.

CATIA V5 is very intuitive and learners can see the result of their efforts after just a few mouse clicks. I know it's a well worn expression, but it is truly 'user friendly' and the different modules are well integrated together. It is very important to us that the various packages within CATIA V5 have a common look and feel, since it means that our learners are more willing to explore them."

24 HOUR CURRICULUM

The college has around 150 learners, of whom two thirds are resident on the college campus. With a 24 hour curriculum, support is always available via the group of specialists assigned to the learners, comprising tutors, residential support workers and medical staff. Each learner follows a timetable that has been carefully crafted to specifically meet his or her personal requirements for skills development.

People of all ages attend QAC; the youngest is 16 and the eldest, thus far is 63. Funding for the participants usually comes from the government or charities. Young people aged from 16 to 25 will typically be funded for QAC courses by the government's Learning and Skills Council (LSC), whilst the more mature student is often referred by their Disability Employment Advisor (DEA) to the college's residential training programme funded by Job Centre Plus.

IMPRESSIVE WORKSHOP

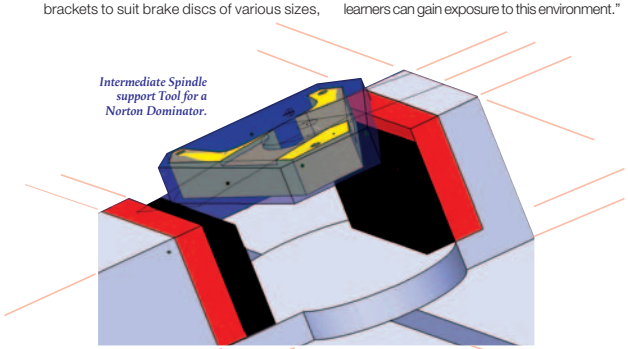
QAC's CNC workshop is probably the most advanced of any specialist college. It boasts a Cincinnati 'Hawk' lathe plus Cincinnati Arrow and Heidenhain machining centres which are driven from CATIA V5 data.

The college has many contacts with local businesses, a number of which provide work which constitutes the basis of projects for the learners involved in CNC studies. One such example is Pete Lovell Developments, a company which provides restoration services and spares for classic motorcycles. QAC has several projects based on various Norton motorcycles for which replacement parts and spares are being reverse engineered into CATIA V5 and then machined in the workshop. These include brake drums for a 1928 Norton, a range of disc brake pad mounting brackets to suit brake discs of various sizes, and a conversion kit for Norton Commandoes which isolate vibrations from the motorcycle frame.

SUPPORT FROM APPLIED

QAC has purchased CATIA V5 from Dassault Systèmes Partner Applied, based in Castle Donnington. Enthuses Craig, "Support from Applied has been simply fantastic. Whenever, I contact them I have a response within hours. I realise that QAC is not their largest customer, but they certainly make us feel very important. Applied gave us their foundation training which has proved invaluable. It is reassuring to know that Applied are there as a safety net for us if we ever get into difficulties and they can advise us about what we need whenever we plan to expand. They are also helping us to make contact with companies using CATIA V5 on a commercial basis so that our learners can gain exposure to this environment."

Intermediate Spindle support Tool for a Norton Dominator.



FUTURE POTENTIAL

Ever optimistic Craig sees a lot of potential for the future at QAC. "Ideally, I would like to be able to offer some of our ex-students work as subcontractors for local customers. This could also incorporate a valuable prototyping service. A rapid prototyping machine would provide an excellent classroom aid for visually impaired learners: they would be able to feel their CATIA V5 models once printed in 3D on the machine. For the same reason I would like to have a machining centre with a 4th axis which we could drive via the CATIA V5 Multi-Axis Machining module. Another subject that I would like to be able to offer is press tool design."

But the work that Craig and his colleagues do at QAC is not just about equipping learners with new skills. Just as important is giving all learners the confidence to go out into the world and achieve their goals. Whatever their background, the learners are fortunate to study at QAC, where the ethos is one of friendly support and caring attention.

QAC would like to hear from employers that have opportunities for students who are currently training, or have been trained on CATIA V5. QAC is a national college and seeks work placements, short term or full time contracts based throughout the UK.

For more information:
cendicott@qac.ac.uk
Call QAC on 0800 234 6859
www.appliedgroup.co.uk