Background

This project aims to encourage engagement in STEM Higher Education through the development of an innovative, engaging & practical mathematics ‘bridging’ programme for new students enrolling on HNC, HND, FD and BEng programmes in Engineering. The engineering courses are offered in full-time, part-time and intensive delivery forms. In intensive mode, a module is delivered over a continuous six day period. A large majority of applicants do not possess the level 3 mathematics qualification required to embark on the programme. The School offers such students the opportunity to take a level 3 bridging course in mathematics via the intensive route.

The School is not funded for the bridging course and therefore its only revenue comes from the minimal fee that the student pays of approximately £85. This course is offered five times during the academic year with, on average, ten students each time. In terms of staffing resources, the bridging course costs the School 250 hours.

Before this project began there were no online resources available to students on the Bridging Maths course. Those who had previously taken the module have expressed the desire to have the level 3 material to refer to for revision and refresher purposes whilst on their programmes.

This project will provide existing students with material/resources that can be used as revision purposes whilst progressing through their programme. Additionally, it is hoped that the intensive module could be delivered as a blended module, with students using the online material for self-study and attending College for two days rather than six.

Progress to date

The project team have conducted research into material and resources that are currently freely available online and although there was an abundance of material it was deemed not suitable for our purposes.

Utilising the already established Virtual Learning Environment (VLE) within Blackburn College, dedicated parent and child pages have been created on Moodle. The parent page will contain important information, such as information about the course, modules, a scheme of work and contact details for the disability and student support officers.

Under the parent page are child pages relating to topics that will be covered in the course containing information, videos, external links and quizzes related to the topic. To date four videos, three Camtasia videos and a number of online quizzes have been produced. There have been a number of issues related to adding mathematical symbols to Moodle, but these have now partially been solved by using a LaTeX equation editor.

The online materials will be trialled with a cohort of students in the autumn.