



Myerscough College

"Setting the gold standard for equestrian sports surfaces"

Land-based college generating and sustaining high quality research

Myerscough College is a land-based college based near Preston in the NW of England. Developing high quality research in a HE/FE college can be a difficult process. It is made simpler however through identifying a college's strengths, particularly with respect to how it can add capability to a research theme.

We realised that Myerscough's research expertise (and equestrian facilities) could be used to help realise and unite a range of research interests in two other UK universities. We could provide a base of resources from which to grow a new research collaboration which would ultimately enhance teaching and learning at Myerscough.

This has now developed into a large international collaboration involving six universities, advising the IOC on the London 2012 games (pictured), generating 7 peer-reviewed journal articles and producing an

International [White Paper](#) on how to technically assess equestrian surfaces for optimal welfare and performance. The group is called Research and Consultancy in Equine Surfaces (RACES).



Overview:

Equine athletes compete on a range of surfaces, some of which are less suitable for competition than other surfaces. Additionally, horses may train on different surfaces than those where they compete. This can influence how well adapted they are and can be implicated in injury. These inconsistencies have implications for both horse welfare (there is a causal link between surface type and injury) and equity in competitions. Myerscough College works in collaboration with researchers from Anglia Ruskin University, University of Central Lancashire, Michigan State University and the Swedish University of Agricultural Sciences to understand and ultimately solve these problems.



The research group have built a biomechanical hoof rig that simulates a horse landing on a surface in gallop and provides information about the vertical and horizontal deceleration on impact and the maximum load. Despite this significant leap forward, the rig does not measure shear forces. Based on the success of this apparatus, the team have further designed, built and developed a torque rig that measures rotational shear on equestrian surfaces. The rotational shear equipment is unique in the world.

Impact:

In the 2014-15, RACES have produced three more peer-reviewed journal articles and are currently in the process of producing a further three.

RACES have co-authored an international White Paper reviewing current understanding of equestrian surfaces and are currently involved in developing standards for equestrian competition arenas worldwide. RACES have subsequently co-produced a 'layman's' guide to equestrian surfaces. Both have been published and approved by the FEI and can be found at <http://www.fei.org/fei/about-fei/publications/fei-books>.

RACES carried out independent consultancy for the Olympics in 2012 at Greenwich Park by assisting in the development of the equestrian arenas built on a raised platform, a unique situation for equestrian competitions.

RACES are still building potential income and are working with organisations such as the FEI, the Polo Club and the Sports Turf Research Institute.

Influencing Education:

The RACES team has successfully produced five MRes students and are currently supervising two PhD students. RACES present their work to a diverse range external groups such as the Rotary Club and stakeholder groups such as the Polo Club and the Fédération Equestre Internationale (FEI).

Three research student internships have developed from the RACES research, two interns work in industry, one of which now works with a large surface-production company.

Most importantly, the work generates huge and enthusiastic interest from the student body. It also generates real aspiration and encourages the learners to realise the importance of independent-think and how it can affect their industry.

There are a large number of dissertation projects generated from the work alongside multiple taught modules which utilise the research to inform their syllabus.

The work has also inspired other departments to follow the lead; there is now further successful research themes developing in agriculture and social research in equestrianism.

To find out more

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