The right raw materials
As a Mechanical Engineering undergraduate at UCL, James Cook used his thesis to bridge the gap between academia and the real world in a powerful, innovative way. Working with Professor Mark Miodownik (UCL Faculty of Engineering Science), one of the world’s most influential material scientists, James helped develop a prototype of a gamechanging bicycle helmet.

The future of cycling?
The helmet uses a revolutionary honeycomb structure that reduces peak G-force by 64% compared to current bicycle helmets. This would reduce the likelihood of injury from a persistent vegetative state to confusion and slight amnesia. It also would reduce angular acceleration of the head – a main cause of traumatic brain damage, something all current helmets fail to protect against. The helmet is currently manufactured through 3D printing, so each helmet can be tailored to each user. James is currently testing and developing his bicycle helmet under an MRes in Engineering at Oxford.

In 2013, James came to UCL Advances for help with Bentham 3D, the start-up he founded to bring this helmet to market. The Student Business Advisors provided invaluable support for setting up the business, and the Bright Ideas Awards 2013 – in which he received £15,000 in funding – was his first go at pitching.

“As a keen cyclist, I am aware of the huge need and potential for this. It was clear to me that James has the necessary drive, knowledge and ability to turn this innovative idea into a thriving business,” Lillian Shapiro, Student Business Advisor, UCL Advances.

A sporting approach
James has another string to his bow – at UCL, he competed internationally for the GB Rowing team, winning a silver medal at the World Student Championships and racing the World Cup in 2013. He is currently rowing with OUBC and will hopefully compete in the 2015 Boat Race. His commitment to rowing is a great balance to business and academia. “Goal-setting is a huge part of everything I do,” James says. “You have to know what your destination is and have clarity about how you’re trying to achieve those goals.” Rowing and entrepreneurship also require a determined personality. “I think it’s important to believe in yourself and what you’re doing,” says James.

Rowing to change lives
In 2011 and 2014, James rowed over 500km of Lake Kariba and the lower Zambezi on the borders of Zambia and Zimbabwe, raising over $20,000 in 2014 to help out local villagers and the charity Village Water. It’s this combination of determination, social conscience, academic excellence and hard graft that makes James Cook and Bentham 3D names to watch out for.
About UCL

UCL (University College London) was established in 1826 and is ranked as one of the world’s top ten universities. The university is a modern, outward-looking institution, with more than 4,000 academic and research staff committed to engaging with the major issues of our times. It has a global reach, with 34% of its students coming from outside the UK, from almost 140 countries.

www.ucl.ac.uk

About UCL Advances

UCL Advances, UCL’s centre for entrepreneurship, helps anyone who wants to learn about, start or grow a business. Its primary role is to promote a culture of entrepreneurship on campus and engagement with entrepreneurs and small businesses beyond UCL’s boundaries. It works to support start-ups and small businesses across London by helping them to access the technical and business expertise of UCL’s staff and students through a series of programmes to help support ambitious young companies.

UCL Advances is affiliated with UCL Enterprise, which provides UCL’s structures for engaging with business for commercial and societal benefit.

www.ucl.ac.uk/advances
www.ucl.ac.uk/enterprise

About Student Engagement

UCL does more to help students learn about, start or grow a business than any other UK university, giving them the critical skills to get a job or start their own venture. UCL Advances offers a whole programme of support – taking them through their entrepreneurial journey. This includes access to training, mentoring, one-to-one business advice from our in-house advisors, access to loans and grant funding, placements and the use of our Hatchery space.

A few of the activities are detailed below:

• The **Student Business Advisers** can provide students (undergraduate and postgraduate) and recent alumni with support to start, build and grow their businesses. Their advice is impartial, confidential and practical – they’re known for no nonsense, pragmatic guidance that fully takes their personal aspirations and goals into account.

www.ucl.ac.uk/advances/students

• The **UCL Bright Ideas Awards** aim to help bridge the gap that many new companies find themselves in when they search for their first funding. The winners of these awards will share up to a total of £50,000 in funding that will be offered as a loan to help get their businesses up and running. Specifically, it is hoped that the money will allow the winners to reach the next crucial milestone in their development, whether that be the first prototype or support for landing the first customer.

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