

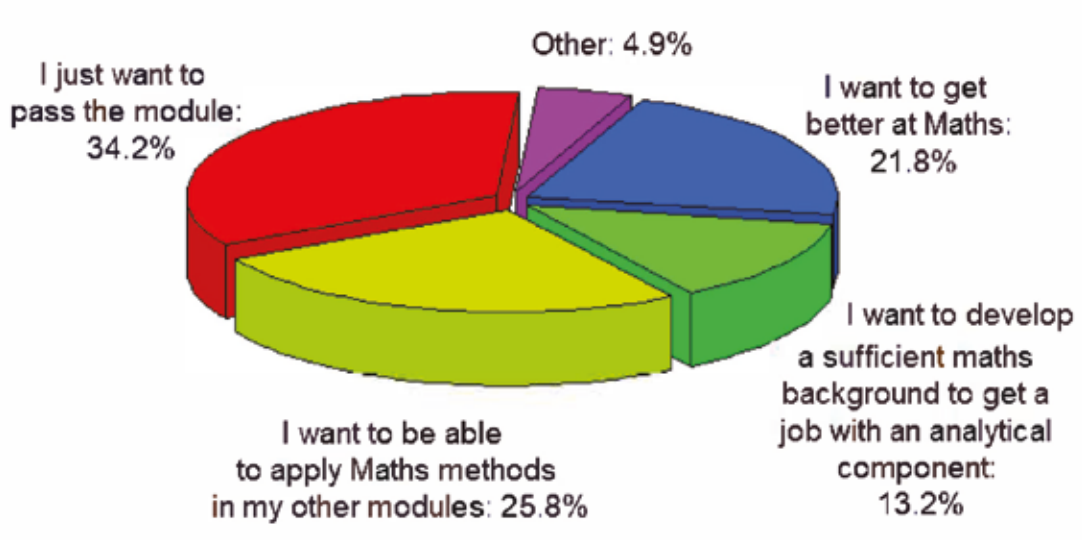
SPIRIT Maths

Students' Perceptions Informing and Redefining Innovative Teaching of Mathematics in Higher Education

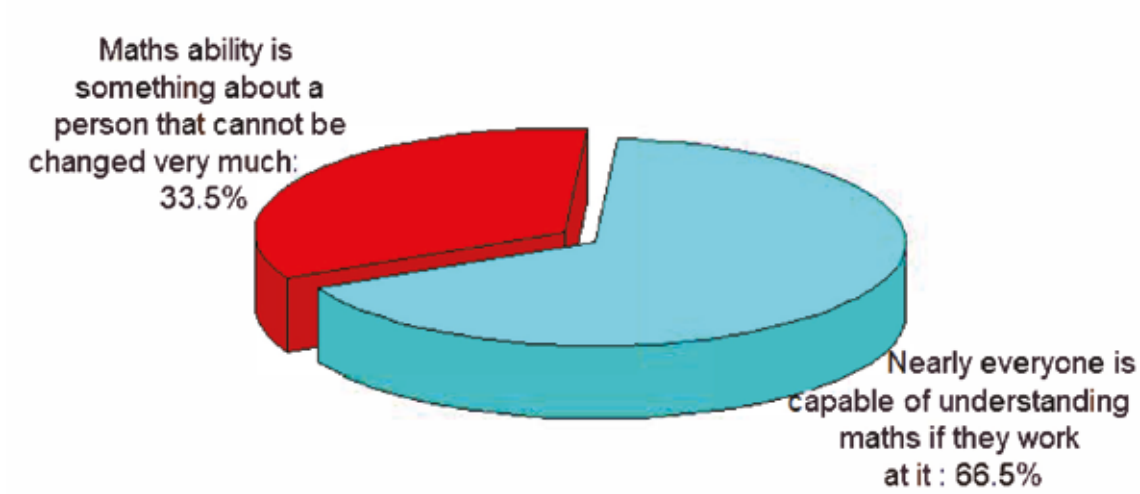


Surveys

Main motivation for doing well in a Maths modules (n = 325)



Which of the following two statements best describes your opinion of Maths? (n = 325)



While learning Maths remotely, what is the biggest obstacle to your active participation in the module? (n = 239)



Which of the following best describes your study approach to your Maths module? (n = 239)



Attitude & motivation for learning mathematics

- For a third of our students the primary motivation is to just pass the module; only 22% wish to get better at maths.
- The lack of motivation is a barrier to students' engagement and progress in mathematics and subsequently in applied disciplines.
- Equally, it is a great challenge for the lecturer.

Perceptions of mathematics

- 35% of our students don't believe they can learn maths or get better at it.
- This impacts both students' learning and lecturers' teaching, but also translates into other numerate disciplines.

Approach to learning

- 44% of students spend one hour or less per week on independent learning.
- 25% of the students only review material before an assessment.
- This may negatively impact exam performance and may also lead to 'surface learning'.

Goals

- Empower students to increase mathematical abilities
- Provide students with tools to succeed in mathematics
- Increase student confidence in mathematics
- Identify suitable learning tools

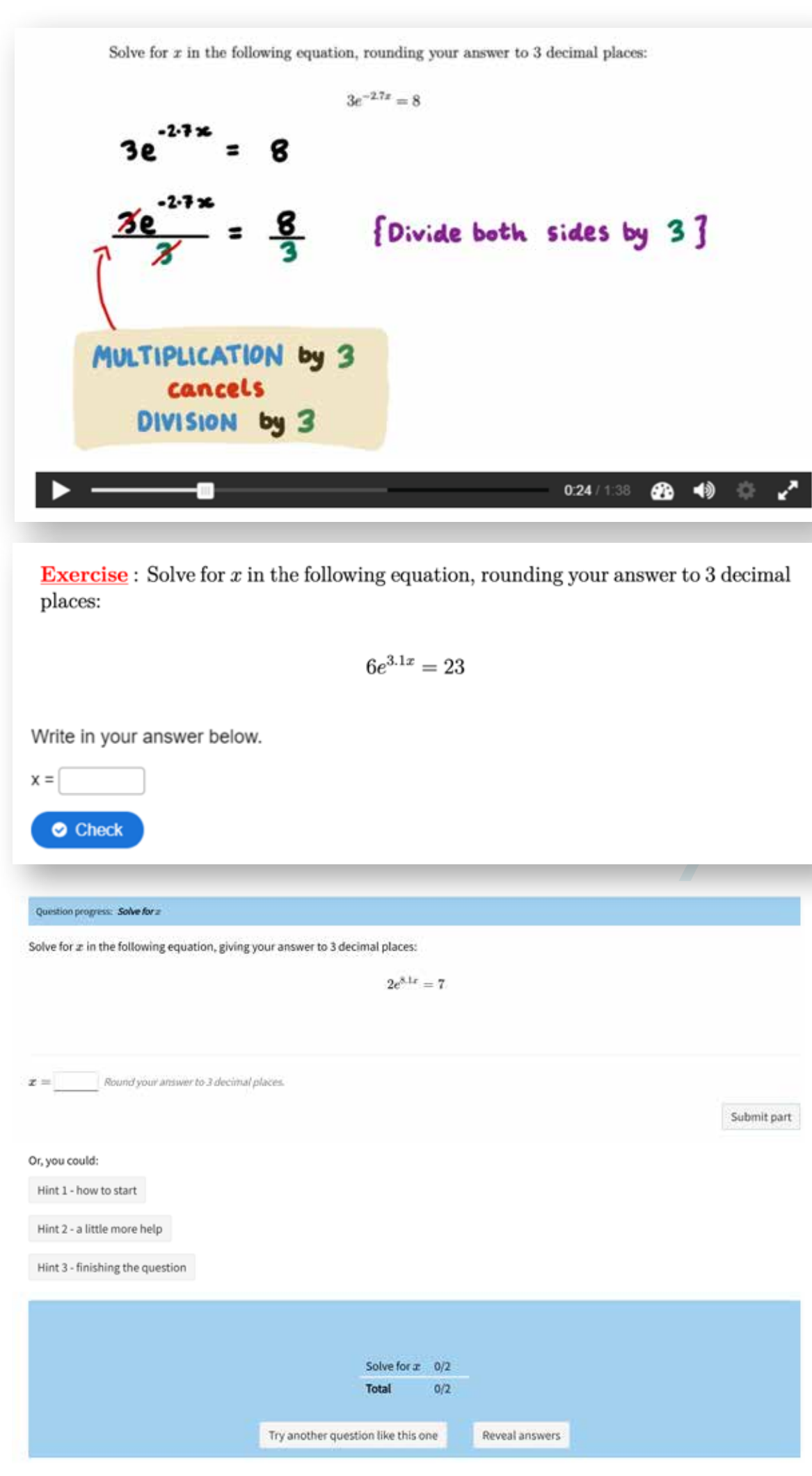
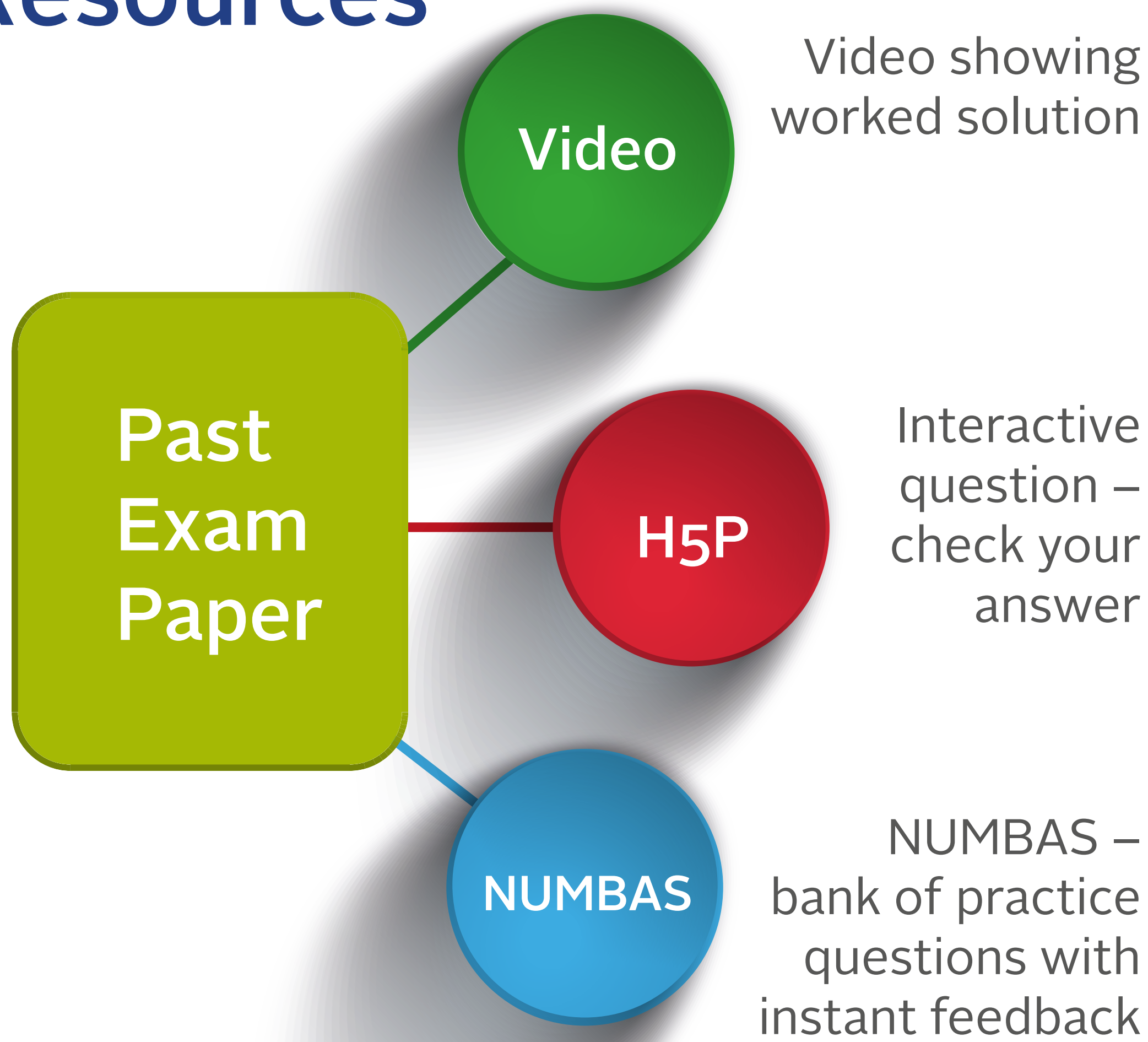
Outputs

- Student survey
- Targeted digital resources – interactive exam questions, video worked solutions, online bank of interactive practice questions
- Online diagnostic test
- Targeted action plan

Timeline



Resources



- Two mathematics modules, taken every year by approximately 500 – 600 first year Business or Engineering students, were selected for a pilot
- The resources are available via **Maths Online** (an online platform accessed by all MTU students) and on www.spiritmaths.com

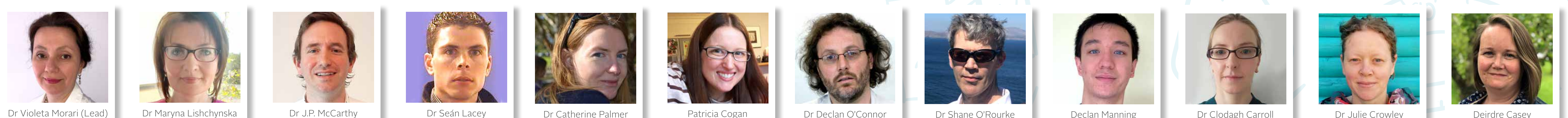
What the Students Say...

"It is easy to follow and user friendly. I like that everything is in one place and is clearly identified. I really like the videos showing the solutions. I personally would find it very useful."

"I think this resource will prove extremely useful to students. I do think having different questions when you do them again will encourage students to do the problems more."

"I liked that I had the ability to control the video solution or example. I also liked the fact that at any point I can go back to look at the process and can take information at my own pace."

The Team



2019/2020

77.3% 58 of 75 CAO intake programmes in the college contain at least one mathematics or statistics module.

83.7% Out of 2,290 first year students enrolled in 2019/20, 1916 will take at least one mathematics or statistics module during their programme.

2020/2021

71.3% 71.3% of first year students in MTU will take at least one mathematics/statistics module during their time in the university.