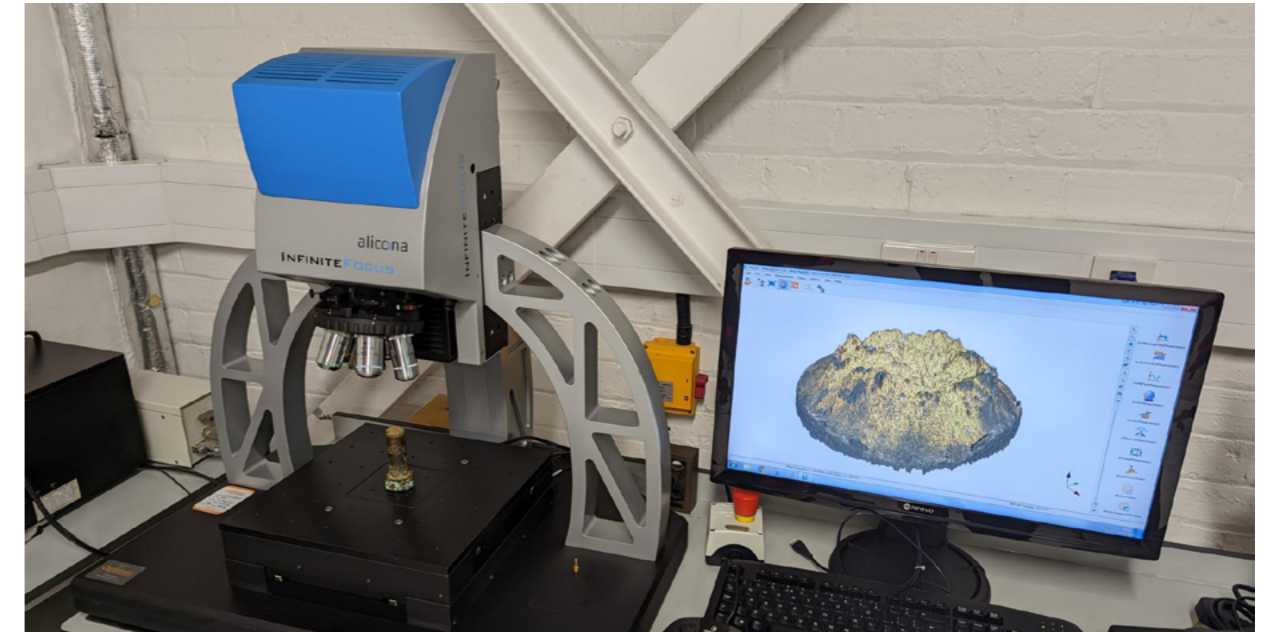


Interacting with industry, Integrating practice into Teaching and Assessment in MSc Advanced Materials Engineering; Level 11 Forensic Materials Engineering

Dr Neil Shearer (School of Computing, Engineering and the Built Environment)

The teaching in this module is lab-based, it does not involve telling students what to do but it is about supporting them to use the equipment in the lab as part of their learning and for the assessment, e.g. the tests they can undertake. In this way, the teaching brings in industry practice in the forms of industry standards and expectations, and supports learning and preparation for the assessment across the module.



Students who have come to Napier for postgraduate study, having completed undergraduate studies elsewhere, express appreciation of more hands on involvement in learning about the processes involved in materials engineering.



Authentic assessment

One assessment asks students to design a Consultancy Report as expected in industry. This requires students to produce a Technical Report and Quote. Students are provided an 'unknown' sample of a material and asked to design and run a series of tests to identify what the material is, how it is manufactured. The assessment integrates employability and industry engaging students in the use of practical skills and with industry standards, with a focus on applied learning.

The Quote element includes the tests they will perform for the client. The report element details what the students did in their work to identify the metal and why they did the tests they did. The report is not to be academic and the financial side of the quote is not important here, what is important is students putting the theory learned into practice.

Alumni have remarked on the value of having developed comfort with these processes which they have gone on to use in employment.