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A modern and interactive approach to learning engineering mathematics.

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The challenges facing those charged with teaching mathematics to engineers are enormous. Faced with large groups of students possessing a considerable range of abilities, prior experiences, and motivations, it is incumbent upon the developers and deliverers of mathematics programmes to engineers to ensure that such programmes are as inclusive as possible and take into account the particular and often individual needs of the student. Often a mathematics lecturer is caught between the demands of an engineering department expecting students to know and apply advanced techniques, and the needs of groups of students who lack confidence, have serious gaps in their knowledge and sometimes lack ability in mathematics. This paper describes an innovative approach to these challenges which involves a mix of traditional and modern technologies and which has been used with some effect at Loughborough University, for the teaching of mathematics to first year undergraduate engineering students.

Classification: D45

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