Curriculum design, assessment and technology in mathematics for biomedical sciences: a case study

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We will discuss the principles of student-centred curriculum design, outcome-based assessment design, and the use of interactive technology in the development of a new mathematics subject for undergraduate biomedical science students. The subject is intended to teach quantitative skills as well as an appreciation of the role of mathematics in biomedical science. We will describe the principles informing the design of the curriculum, such as the choice of topics to complement other biochemistry and genetics subjects in the course and based around themes such as equilibrium and stability. We will discuss the use of various interactive applets and similar technology in the course, and their effect on student learning. We will also discuss the design of assessment, including the use of oral presentations to develop and assess oral communication skills, with reference to the Threshold Learning Outcomes for Mathematical Sciences.