AN ONLINE MATHEMATICS AND STATISTICS REFRESHER PROGRAM FOR THE COVID-19 ERA AND BEYOND

Jim Pettigrew[a], Leanne Rylands[a,b], Lyn Armstrong[a], Don Shearman [a], Adelle Colbourn[a], Gizem Intepe[a], Susan McGlynn[a]

Presenting Author: Jim Pettigrew (j.pettigrew@westernsydney.edu.au)
[a]Mathematics Education Support Hub, Western Sydney University, Sydney NSW 2751, Australia
[b]Centre for Research in Mathematics and Data Science, Western Sydney University, Sydney NSW 2751, Australia

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In February 2021, the Mathematics Education Support Hub at Western Sydney University delivered, for the first time, its long-established mathematics and statistics refresher program for commencing students wholly online. The process of completely replacing its face-to-face program with a series of online self-directed learning modules was complex, not least due to the constraints imposed by COVID-19. Planning and development started in October 2020, with a staged rebuilding of existing content in basic algebra, trigonometry, calculus and statistics. The aim was to achieve more than the mere construction of a digital 'text book' consisting of modularised sets of static files. The development was guided by design choices such as content chunking, use of video and interactive learning visualisations, and facilitation of self-checking via mastery quizzes (created using the mathematical e-assessment system Numbas).

In this presentation, we shall discuss the pedagogical, curricular, and technical challenges that arose during the development of the online refresher program, and the steps taken to ensure the new learning modules were accessible and effective, together with an analysis of data collected during and after the running of the program (survey responses, learning resource interaction, quiz attempts and Zoom attendance).