

We introduced preview and pre-testing of prerequisite skills early into the course with follow-up engagement measures for students who perform poorly, developed an online homework master course, calculus resources webpage, and created a common final exam component. The outcomes were surveyed based on assessment of itemized data from the common component of the final exam, the entire final exam, course grades, and student self-assessment of learning gains. This data gave us unique insight into influence of different elements of the course on its outcomes, in performance and student perspective, measure outcomes more uniformly, try new approaches and see if they worked, and develop revisions to improve the course. They include moving integration to Calculus 2, expanding the common component of the final exam, continuing prerequisite reviews and final review sheets, utilizing supplemental instructors for recitation type sessions, and making online homework explicitly influence grades.

Prerequisite worksheets, final exam component review sheet and help materials are available at the UHD Student Calculus Webpage <https://uhdcalculus.wordpress.com> . In addition, content of online homework master course in WebAssign, a copy of the common final exam component with the grading rubric, and a copy of the assessment report on the implemented changes to the course based on both performance measures and student self-evaluation of gains, along with recommendations for course revisions, are available upon request from:

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