

## Abstract #6: Poster (Research Study)

### Instrument Enrichment Pilot Program: A Study

The Medical Laboratory Science Department at the University of Massachusetts Dartmouth was awarded a grant in 2016 to create a laboratory enrichment pilot program to enhance the laboratory skills of sophomore level students. This was necessary due to previous course failures in the junior year Clinical Chemistry course (MLS 342) causing retention issues (with a 3-year unsuccessful average of 17.79%). In this study, data in the form of student surveys, laboratory practical grades, and final course grades for MLS 342 are used for assessment of the program. Junior-level students who participated in the pilot program as sophomores completed a survey after finishing MLS 342. The majority (88.89%) of students indicated that they would strongly recommend the program to future sophomore students. Areas that students felt particularly prepared for in junior-level chemistry were pipetting and dilution skills, spectrophotometer skills, total protein assays, standard curves, and exam preparation. The 2 sample t-test was used to compare the 3- year average MLS 342 course grade to the new data for students who took the pilot and those who did not. Students who took the pilot did statistically significantly better (86.669%,  $p = 0.0078$ , 95% CI 1.0209, 9.3551) when compared to the 3-year average (81.481%) than those who did not (82.996%,  $p = 0.2693$ , 95% CI -3.4303, 6.4603). In addition, 100% of the students who took the enrichment program were successful in MLS 342. These data suggest that the pilot program contributed to increased student success in junior year Clinical Chemistry. Positive student comments and ratings on survey data also supports the utility of the pilot program.