

CHEM 295 Poster Abstract
Zidong (Edison) Zhou, Ambika Bhatt, Joshua Beaver

Organic Chemistry II, CHEM 262, is the second course in a two-semester sequence which builds upon fundamental concepts learned in each of the preceding chemistry courses, and has a total of 800 students per year. CHEM 262 is a content-heavy and fast paced course, covering a variety of reactions and techniques. Accordingly, student behaviors and habits formed in the beginning of the course can have a large impact on the overall success of a student. Because of these characteristics, it is critical for instructors to evaluate student performance starting from an early stage. We seek to identify possible signs for academic difficulties early in the semester, and implement targeted interventions to help students recover from early setbacks. We have successfully developed a preliminary model to identify students who may substantially benefit from targeted interventions at an early stage in a semester. We were able to achieve an accuracy of 96% through the current model, which is based on analysis of multiple metrics, including assignment submission time, score, and consistency. Efforts were also made to develop an effective format for future targeted intervention. A restructuring of current LA sessions increased students' actively learning time by 233%.