

“Evolution” of CHEM 129

The Reality: Large number of students who need chemistry for their major, but are unprepared to be successful in CHEM 130 (Chemical Principles I)

- This number seems to be on the rise.

The Challenge: How do we give these students an opportunity to recover from this challenge and be successful in their programs?

- Enter CHEM 129, first taught Summer 2010
 - Small class size (24 max), 3 credit hours
 - Intensive introduction to concepts and problem-solving
 - Diagnostic exam and math placement helps determine suitability
 - 460 students (20 sections) between Summer ‘10 and Spring ‘12
 - Common final exam

Current Experiment

- Given budget and staffing challenges, multiple small CHEM 129 sections became unfeasible.
- How do we help students develop the skills they need in a less faculty-intensive manner?

Two parallel approaches, both involve an instructor meeting with a large section (up to 72 students) twice a week with instruction supplemented in one of two ways:

1. Out of class online guided problem solving using ALEKS
 - Dr. O'Brien
 2. Utilization of student supplemental instructors to meet with a smaller (24 student) section of the class once a week.
 - Dr. Lamp
- Observations/outcomes from Fall 2012 and Spring 2013

Plans for Fall 2013

- Maintain large class sizes (up to 72 students)
 - Two sections, Dr. O'Brien and Dr. Kramer
- Increase faculty-student class time from 2 hours to 3 hours per week
 - Adjust pace and perhaps present opportunities for more interaction
- All sections will utilize ALEKS online system
 - Encourages development of problem solving skills
 - Minimize amount of homework that must be physically collected and grades