

CHARLES H. ATWOOD , UNIVERSITY OF UTAH



" **IMPROVING SUCCESS RATES IN LARGE GENERAL CHEMISTRY CLASSES**



TUESDAY, NOVEMBER 12TH @ 2:30 PM THATCHER SEMINAR ROOM (TBBC 4630)

We have collected data from 2000 to 2012 on the students that have taken CHEM 1210. From this data we can see trends in student performance that will help us decide how to best direct Utah students to be successful in this gatekeeper course. Among other items to be discussed are minimum math performance, course repeaters, and prep chem course success rates.

Butch Atwood is a native of Laurel, MS. After matriculating through the Laurel City Schools he headed off to Millsaps College in Jackson, MS where he received his BS in Chemistry. Graduate school at Florida State University immediately followed. He received a PhD in nuclear chemistry in 1979. Postdoctoral work at the Australian National University occupied the next three years of his life. In 1982, Butch began pursuing his present passion of teaching and improving learning in chemistry classes with a new position at the University of Georgia. For three years Butch and his wife, Judy, lived in Athens, GA and raised their two children. In 1985 they moved to Macon, GA to start work at Mercer University. After 10 years at Mercer the University of Georgia's chemistry department invited Butch to return to assume the position of general chemistry coordinator. This work occupied the next 17 years of his life. In 2011 the University of Utah invited him to become the Ragsdale Professor of Chemical Education. Butch and Judy left Athens in July of 2011 leaving behind a great job to assume a fantastic one in Salt Lake City.

In recent years his research has focused on using Item Response Theory coupled with computerized assessments to determine those areas of chemistry that are particularly difficult for beginning students. Often times those topics which trip up beginning students appear to be excessively easy for faculty, so-called professorial blind spots. However, once these are brought to the attention of the faculty changes can be made in instruction that have positive learning outcomes for the students. Other areas of interest to Butch and his group are introducing educational gaming into the chemistry curriculum, developing physiological measures of metacognition, and how do chemical demonstrations affect learning in large classes.





Charles "Butch" Atwood