New Traditions

The overarching objective of the New Traditions Program is to facilitate a cultural change in Chemistry Education at the college level. The essence of this change is a paradigm shift from faculty-centered teaching to student-centered learning. The goal of the NT Project is to effect a deeper conceptual (non-algorithmic) understanding of chemistry, a higher level of science literacy, and an enhanced ability and enthusiasm for lifelong learning in all students who take college chemistry. We focus on constructing, implementing, and evaluating instructional paradigms that emphasize active student involvement in constructing their own knowledge. Students will have an integrated series of experiences that optimize and deepen their learning experience, their ability to think critically and their experimental skills. These paradigms are then introduced into institutions different than the one where they were created, thereby proving their universal appeal. We intend to develop a curriculum with content that is appropriate for the students we currently teach, not for the students we'd like to have.

Participants can expect to gain hands-on experience in the implementation of

- Active-learning strategies to supplement lectures (ConcepTests)
- Guided-inquiry and open-ended laboratory experiments
- Cooperative learning group activities (challenge problems and learning communities)
- Information technology/Computer tools (UW ChemPages, Mathcad® and WebCT)
- New assessment techniques

We are more involved with changing the process by which chemistry is taught than with products. The "products" are data on what works and examples of ways to accomplish the vision stated above: those successful techniques and strategies in learning and teaching undergraduate chemistry that are independent of students' background, class size, and institution.