

RESULTS OF INTEGRATING RESEARCH-INSPIRED LABORATORY MODULES IN THE GENERAL CHEMISTRY CURRICULUM. Monica Baloga, Kurt Winkelmann, George Anquandah, Peter Cohen, Department of Chemistry, Florida Institute of Technology, 150 W. Univ. Blvd, Melbourne, FL 32901

Beginning in the fall 2010 semester, Florida Tech updated its general chemistry I laboratory curriculum in order for students to engage in interdisciplinary, research-inspired lab modules. Each multi-week module was based on research currently being conducted at Florida Tech in the departments of physics, marine and environmental science, mechanical and aerospace engineering, and chemistry. The respective module topics are: generation of NO_x gases via electrical discharge, use of nanoparticles to remove water pollutants, effect of surface treatment on composite properties, and removal of aqueous pharmaceutical pollutants using high oxidation state iron (ferrate). Students chose a particular aspect of the module to investigate then wrote a laboratory report describing their work. Students completed surveys to determine their familiarity and comfort level working in a chemistry lab and performing open-ended research projects or inquiry-based laboratory experiments. Results of this ongoing project will be presented, along with future improvements to the curriculum.