College of Engineering
Summer Research Experience for Undergraduates Program

Request for an Engineering Student for Summer 2013 Research

Faculty Name ________John Tobiason_______________________________

Phone _545-5397_______________________________________________________

Department   CEE____________________Email:      tobiason@ecs.umass.edu__

Brief description of Summer Research Project (please explain the interdisciplinary nature of this project).

The project entails working with graduate students to study the use of ferrate in drinking water treatment. Ferrate is a “green” oxidant that may be beneficial for meeting treatment goals without some undesirable side effects associated with other oxidants. The project involves laboratory experiments with water samples, as well as sample collection. The US EPA funded project is interdisciplinary in that it is focused on small water systems, economic analysis and potential applicability to Native Americans, along with reactor engineering and chemistry

Brief description of what the student will be doing:

The student will conduct bench-scale experiments that involve addition of ferrate and related coagulants, and subsequent measurement of various water quality parameters using instruments in the UMass Environmental Engineering Laboratory. Analyses includes iron, manganese, organic carbon, and formation of disinfection by-products

Is this a CASA-related project? Yes ___ No  X

Preferred background of student (major(s), class, GPA, pre-requisites, etc.):

Civil, Environmental or Chemical engineer with interest in water quality and laboratory experimentation.

Did you mentor a student last summer in the College REU Program?
Yes____  No  X  (one of my student’s participated, but I funded him from my grants)

If yes, please describe the outcomes for that student (i.e. Honor’s thesis, conference presentations, manuscripts, papers, etc. Describe accomplishments to date as well as plans for the spring semester if the work has continued):

Work will be part of Honors Thesis for the student in Spring 2013 as well as a written report to the Springfield Water & Sewre Commission

Please return this form to: lrobidou@ecs.umass.edu by February 1, 2013