Course Syllabus - UVM/GIV Environmental Science and Technology Institute

**Title:** UVM/GIV Environmental Science and Technology Institute (GEOL 095)
**Credits:** 3 Credits; 45 Contact Hours.
**Instructor:** Paul Bierman, PhD (Geology and Natural Resources); pbierman@uvm.edu

**Meeting dates and times:** June 15, 2015 - June 27, 2015; pre-meeting assignment then daily from June 21-27 with evening sessions.

**Location:** University of Vermont

**Course Description:** In this course, Vermont high school students will learn about Environmental Science and Technology. Through extensive hands-on activities and a variety of experiences, participants will learn how practicing environmental scientists understand Earth and human interactions with our planet. During the on-campus week, students will work directly with science faculty and graduate students as well as meet engineers, scientists, and professionals who manage environmental systems including power plants, sewage treatment plants, and recycling operations. Hands-on student research will address pressing environmental problems including air, soil, and water pollution and the effect of this pollution on organisms in the environment.

**Expectations:** All students are expected to do the following as part of this class.

1. **Pre-Institute** – Please read *An Earth without people*, Scientific American; July 2007, Vol. 297 Issue 1, p. 76-81. This reading will be sent to each student by email. Then, craft a short essay (between 1 and 2 pages, double spaced) reflecting on the human impacts on the environment in the town in which you live. Send this essay to pbierman@uvm.edu before Friday June 19, 2015. The article and each student’s essay will set the stage for discussions during the week.

2. **During the Institute** – Attend the GIV week and participate fully in all activities working with your team collecting, processing, and understanding environmental data. Make a group presentation to peers and parents on June 27, 2015. Complete the Institute evaluation.

3. **End of the Institute** – Write a reflection paper (between 1 and 2 pages, double spaced) describing how what you did and learned at the Institute affected you personally and professionally – tell us what you learned and how you changed during the week on campus. Send this essay to pbierman@uvm.edu before leaving the Institute.

Essays will be assessed both on content and writing quality.