Global Change
July 8-12, 2013

Application Deadline:
May 20, 2013

◊ Credit: 2 Graduate Credits
◊ Cost: $350 off campus includes credit, 5 lunches, field trips, curricula and classroom supplies
◊ $595 on campus includes 5 nights lodging, all meals
◊ Payment due June 1, 2013

◊ How to Apply: complete application form at wupcenter.mtu.edu

Submit Applications to:
Lori Witting
Email: lori@mtu.edu
Tel: 906.487.2263

For More Information:
Joan Chadde, Course Coordinator
Tel: 906.487.3341
Email: jchadde@mtu.edu

About the Institute

This five-day Institute will prepare you to engage your middle and high school students in a real-world study of the effects of global change on ecosystems, including the impacts of climatic change, elevated carbon dioxide and ozone levels, nitrogen saturation, acid rain, and invasive species. Through lecture, hands-on data collection and field trips, participants will interact with scientists and gain new knowledge and skills. Teachers will be trained in and receive the Michigan Environmental Education Curriculum Support Climate Science & Impact unit (easily adapted to other states). National and Michigan standards for mathematics; life, Earth and physical sciences; and technology will be addressed.

The Institute will be taught by internationally-recognized researchers from Michigan Tech University’s School of Forest Resources and Environmental Sciences, along with guest scientists from the USDA Forest Service Forest Science Lab, Northern Institute of Applied Climate Science and expert teachers. The institute provides an opportunity to interact and collaborate with teachers from across the Midwest and United States.

Participants will visit long-term field research locations used to understand the subtle impacts of nitrogen deposition and climatic variability on forest growth, examine the effects of experimental warming on northern ecosystems, and investigate a subterranean rhizotron research facility where scientists study soil carbon sequestration.

This Institute is partially funded by a grant from the National Science Foundation
Course Credit & Requirements
Participants will earn two graduate credits (FW5641/ED5641) from Michigan Technological University. Course requirements:

◊ Complete pre-course readings.
◊ Participate fully in all parts of the Institute.
◊ Develop a 5-day teaching unit after the institute that includes five lessons related to global change (using the rubric provided) and that meets applicable content expectations. Participants should plan to implement the unit during the 2013-14 school year. Due Sept. 1, 2013.

Master of Applied Science Education
The credits earned from this institute can be applied to an 18 semester-hour planned course of study for teachers working towards their Professional Certificate or a Master of Science in Applied Science Education at Michigan Tech.

Cost
Total cost of the institute is $350 off campus which includes 2 credits, five lunches, field trips, curricula and classroom supplies, and $595 on campus that includes 5 nights lodging and meals. [Generous support from the National Science Foundation and the MTU School of Forest Resources & Environmental Sciences has reduced the cost of MTU tuition (official 2012-2013 MTU Applied Science Education Graduate Tuition for Residents/Non-Residents is $485 per credit)]. Payment due June 1, 2013.

Getting to Michigan Tech
Michigan Technological University is located in Houghton, MI (pop. 7,000). United Airlines is the sole airline serving Houghton (800.241.6522 or www.united.com) with 2 flights daily from Chicago. Taxi service is available for by calling Neil’s Taxi Service at 906.482.5515 or Copper Country Limo & Taxi at 906.482.4761.

Accommodations
Participants staying on campus will receive 5 nights lodging in single rooms with private baths in Michigan Tech’s new Hillside Place and all meals from Monday breakfast through Friday lunch. Easy walking distance to downtown Houghton and Michigan Tech recreation trails.

Financial Aid
The Michigan Space Grant Consortium K-12 Educator Incentive Program will provide up to $400 for Michigan teachers to attend workshops on math and science. For an application: http://mi.spacegrant.org

How to Apply
Applications available online at: http://wupcenter.mtu.edu
Application deadline May 20, 2013.
Submit applications to lori@mtu.edu

For More Information
Joan Chadde, Course Coordinator
Center for Science & Environmental Outreach
115 Great Lakes Research Center
Michigan Technological University
Tel: 906.4887.3341 Fax: 906.487.1029
Email: jchadde@mtu.edu