:: CEMS Home
About
News, Events & Multimedia
Prospective Students
Current Students
Faculty & Staff
Programs & Departments
Research
Alumni
Diversity
Outreach
CONTACT CEMS

Future Engineers to Explore Technology and the Human Experience

Release Date: 06-29-2010

Share this article

Author: Dawn Marie Densmore
Email: Dawn.Densmore@uvm.edu
Phone: Array Fax: 802-656-8802

Approximately 80 high school students will work on five different engineering projects: Renewable/Sustainable Energy Engineering, Robotics, Aerospace Engineering, Engineering Design, and Earth Science during the UVM/GIV Engineering Institute from June 26 through July 3, 2010. Students will work in teams to design and create devices to accomplish specific tasks, including:

- A Robot for locating survivors, etc.
- An atmospheric probe using helicopter principles
- Energy systems focused on solar power, wind and biomass earth systems engineering
- A children's toy for the Vermont Teddy Bear Company

"This Institute will provide these future engineers with an awareness of how technology impacts the human experience," says Bernard "Chip" Cole, Interim Dean of the UVM College of Engineering and Mathematical Sciences, and keynote speaker for the Institute. These high school students will also be inspired by presentations from professors, engineers, computer scientists, and mathematicians on current technological challenges."

The 8 day/7 night program also brings students on enlightening project tours that will provide students with knowledge about career opportunities within aerospace, biomedical, civil, mechanical, and electrical engineering as well as statistics, mathematics, and computer applications. The participating students will also have the opportunity to compete to attend the International Earth Science Olympiad (IESO) to be held in September 2010 in Indonesia.

Governor's Institutes of Vermont (GIV) Engineering is one of seven Governor's Institute of Vermont offered in Vermont. GIV also offers Institutes on: Asian Cultures, Arts, Current Issues & Youth Activism, Information Technology, Science & Technology, and Mathematics. For more information visit: http://www.giv.org/

Engineering Project Details

Students enrolled in the Renewable/Sustainable Energy Engineering Project will examine different energy systems, including solar, wind and biomass, and will participate in a tour of NRG facility located in Hinesburg,VT.

Robotics students will design robots that can do surveillance, food delivery, land mine detection, earthquake survivor location, etc., as well as see robotics at Hazelett Strip Casting located in Colchester, VT.

Students will build prototype atmospheric probes using parachutes, small balloons, and helicopter principles as part of the Aerospace Engineering Project. Probes will be launched with the goal of probes falling to earth as slowly as possible -- gathering data along the way. Students will participate in a demonstration by General Dynamics at the Underhill Firing Range located in Underhill, VT.

Engineering Design students will create toys for Vermont Teddy Bears within parameters determined by Dr. Mike Rosen in the School of Engineering. Dr. Rosen oversees Freshman and Senior hands-on student projects in CEMS. Students in this project will tour the Green Mountain Coffee Roasters (GMCR) Plant in Waterbury, VT.

Earth Science Engineering students will conduct research on the Earth System Engineering Issues surrounding Vermont Yankee and will work with professional engineers and scientists. Sand Arches will be created by students at the Burlington Beach during the week. Each arch will be judged based upon its height/width and span.

The Recognition Awards Ceremony will reward students for engineering projects. Students will also receive recognition for written Technocratic Oaths that reflect life purpose, and for Poetry reflective of their experience in the UVM/GIV Engineering Institute.

Major Contributors: NASA Vermont Space Grant Consortium, UVM College of Engineering and Mathematical Sciences, and NSF MUSE Grant Scholarship, P.I. Jeff Frolik.

Other Institute Contributors: Domino's Pizza, FedEx Kinkos, Hannaford's Food & Drug Superstore, Green Mountain Suites, Mazza's Farmstand & Greenhouses, Shaw's Supermarkets and the University Mall.

< p>